THIS MONTH'S LIST: GARDENERS' RESOURCES

JUNE 1996

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

109th MONTHLY ISSUE

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Profiles of the People Who Wire Small Towns

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ISSN: 1054-2760
Volume X, Issue 6
JUNE 1996

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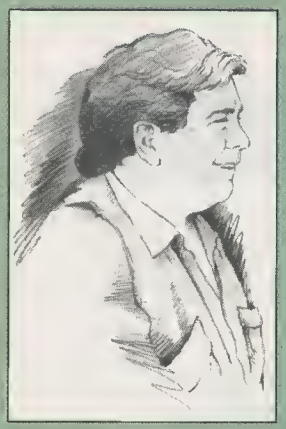

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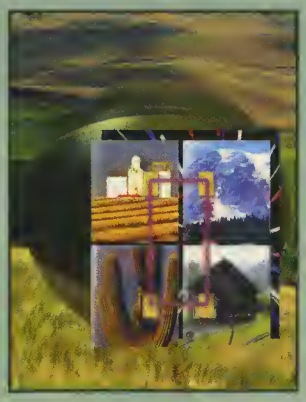

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Boardwatch Magazine (Issn:1054-2760) is published monthly at an annual subscription rate of $36. ($99 Overseas) by Boardwatch Magazine, 8500 W. Bowles Ave., Suite 210, Littleton, CO. 80123. Second Class postage paid at Littleton, CO and at additional mailing offices. **POSTMASTER**: Send address changes to: Boardwatch Magazine, 8500 West Bowles Ave. Suite 210, Littleton, CO 80123
Printed in Canada.

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All signs point

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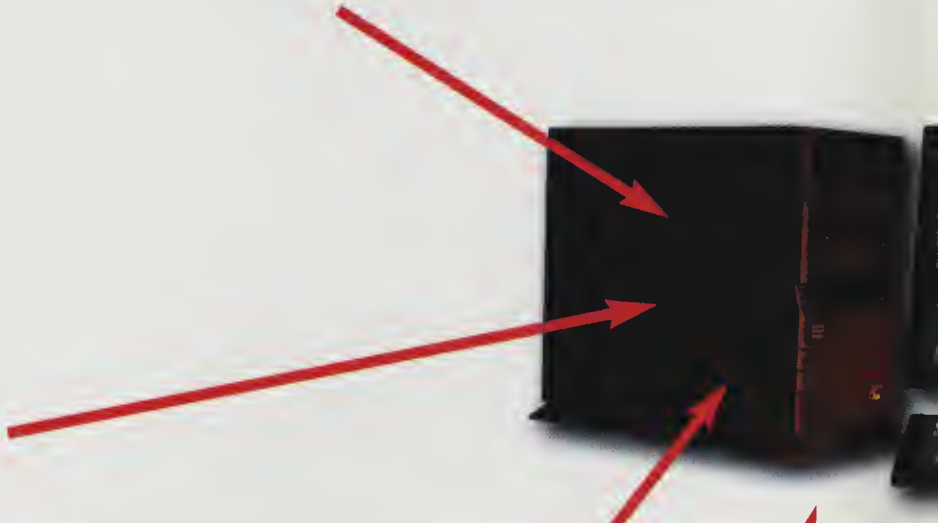

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EDITOR'S NOTES

SO...YOU WANT TO BE AN INTERNET SERVICE PROVIDER

It is a bit amazing the number of widely known Internet factoids that just aren't so. The latest is a series of predictions that the number of Internet Service Providers is decreasing as the market shakes out in the face of the likes of AT&T WorldNet making them obsolete. AT&T is apparently building the first and only truly worldwide totally awesome Internet backbone woven entirely out of newspaper headlines and press releases. If they can pull that off, it will change the design, architecture, and topology of backbone networks forever. ATM switches could be entirely unnecessary to the process. But everyone we talk to knows for a fact that the ISP market is consolidating and an enormous shakeout is occurring.

Meanwhile, we published our first directory of Internet Service Providers in March with some 1447 North American Internet Service Providers we had located by February 15 of this year. As of the first day of May, I'm told we have just under 2300 verified, contacted, talked to, and well-known ISPs in our database for the Summer 1996 issue due this month. Unless we have magically become significantly more efficient in locating them in the past few months, it would appear that the number of ISPs in North America has grown 59% in two and a half months. That works out to 23.5% per month or an annual growth rate of 283%. From our point of view, right now that looks like 17 new Internet Service Provider businesses per day. How many go out of business? We've lost 15 from the database so far this year — somewhat shy of the oft predicted bloodbath.

Where is saturation? Well, this question again involves a reality check from the neck up. My best guess is that this past month we broke 10 million people in the United States who really did have access to the Internet, and that works out to something under 3.7% of our population. I think ultimately about 30% want to be, should be, and will be. And I will feel that there are sufficient ISPs in the world about the time the phone stops ringing around here with people desperate to find some connection to the Internet somewhere. In this issue, David Hakala tackles a very problematical portion of the question — deploying Internet connectivity to rural America. There are a lot of people who have succumbed to the incessant hype and press hysteria about the network and are ready to make the connection. They have one minor problem, they can't do it from where they are.

True, it is competitive in some areas. The San Francisco bay area is positively netlocked with both traffic and a glut of ISPs. But the rest of the country is suffering from net lag. And it is true there are some consolidations. AGIS bought out Net99 and this week, Metropolitan Fiber Systems has bought out UUNET Technologies. The biggest fallout here is a likely SEC investigation into the incredibly suspicious options trading in UUNET stock on Monday, the day before the deal was announced. In all likelihood, this is the gruesome fate awaiting those ISPs who just can't compete with AT&T's paper backbone — they'll be bought out for more money than they ever dreamed had been printed.

So we see the ISP market as booming. While the trek to the Internet gold field continues, these guys are selling shovels hand over fist. Inherent in this is the fact that they pick the make and brand of shovel and shovel accouterments they purvey.

Shovel makers are slowly waking up to this. The usual marketing devices aren't working. As part of empowering everyone on the Internet with a voice, we have created a VERY noisy network. The signal to noise ratio is disappearing in favor of the noise. And it is alarming to a Microsoft, Ascend, or Cisco to learn that their press releases and announcements carry approximately the same weight on the network and on the desks of editors everywhere as the press release announcing the first, biggest, best, and most revolutionary web page for dyslexic Australian aborigine nuns — the Sisters of RaliaAust Dream Time.

The result is that no one with a message can convey it. If you have a prototype on your desk of a modem device capable of passing 155 Mbps over ordinary voice lines, or better, a 24 Mbps radio modem that uses no wires at all, something that really COULD revolutionize the way we network, the odds of getting the word out about it to anyone who cares is rapidly approaching nil. Never mind the long-suffering situation of someone like Bob Baskerville of MMB Development. He gets to watch half of corporate America out there searching vainly for a UNIX server that does what he was trying to do with TEAMate in 1986. Suddenly everyone is looking for it, and indeed some are announcing it with good intentions of developing it sometime real soon now, but Bob can't be heard above the noise of all the seeking. It has to be frustrating to be proven right in your own time, and nobody know about it.

Search engines such as Yahoo and AltaVista had offered some hope of lending organization to chaos. For a few months, they were truly useful in finding things of interest. Dare I blaspheme? In the past two months I have found these engines, still marvels, but increasingly USELESS marvels. Almost any keyword on AltaVista will pull up 10,000 entries now. That doesn't narrow things down much for me. I need a search engine to parse the results of the search engines. The magic here is dissipating rapidly.

Where is the computer press in all this? Frankly, it's hopelessly hosed as well. John Dvorak and I were discussing this on the phone the other day. He was ruefully plowing through the process of getting smart on Frame Relay and ADSL the same afternoon I was trying to learn to spell ATM. The technology is moving so fast you can't keep up with it — even if you're good. By the way, we're both good, but we've reached our level of incompetence here. And most of the 24 monthly books I'm seeing devoted to networking now are penned by geeks who think the Sisters of RaliaAust web site really IS the cover story for the next issue. They disingenuously take the position that their sacred writings are for the REST of us who aren't technoids and so they don't want to confuse any of their readers with technical information? Great. Put it in ***Time Magazine***. Who is sorting out the technical information into something comprehensible and what, pray tell, is the computer press for then? The rest of OUR readers still want to know how it works, and who the winners are so they can avoid having the old obsolete crusty stuff in three months — instead of the six months they are accustomed to becoming obsolete in.

In a lot of cases, small companies and end users are simply going with whatever their Internet Service Provider uses, is familiar with, and can help them set up

and configure. It may or may not be the "best," but at least it will work and will be compatible with their ISP's operation. However haphazard this approach may be, it is emerging as the solution of choice. And the truly profitable ISPs are quickly getting with this Value Added Reseller or VAR role.

The result is that there is more to being an Internet Service Provider than providing "Internet Dial-Tone" and this group of 2300 Internet Service Providers is emerging as the most leveraged, focused force in the Internet. The products they quietly bless and recommend are likely to be the winners. And the products they dismiss, rightly or wrongly, are going to find it an uphill climb toward acceptance by the customers of those ISPs.

But there are a lot of issues. Who owns IP numbers? What can be done about the domain name issue? And how are these ISPs going to be affected by the Telecommunications Reform Act of 1996? To my way of thinking, we need to have a national meeting of Internet Service Providers. If we don't gather in force, and become one, virtually all legislative and administrative decisions coming out of Washington will be to favor backbones constructed of headlines and press releases.

So let there be one. We would like to invite all current and potential Internet Service Providers to the first national and indeed international meeting of Internet Service Providers ever held — this August 7-10 at Moscone Center in San Francisco. The Online Networking Exposition and Internet Service Provider Convention (ONE ISPCON) promises to be the most exciting gathering of the year, not so much because of what it is, but rather because of who is coming — a significant portion of the 2300 Internet Service Providers who actually operate the Internet and in so many ways large and small mold and shape its future.

In the onslaught of press hyperbole regarding the Internet, the actual nuts and bolts of how an Internet exists and who does the hard work of providing individuals and businesses with useful connections to it seems to have been "virtually" forgotten. But the truth is that this is an immature technology and in many ways an industry just now emerging from the chaos of birth. There are an enormous variety of questions — technical, legal, economic, legislative, and even social that beg solution. It is all too often in the equipment rooms and offices of Internet Service Providers where the problems become first evident, and where the solutions must ultimately be deployed. And like any such new industry, there are huge opportunities to embrace, as well as perilous pitfalls to avoid. As we know from the past, the result will be huge winners establishing enormous fortunes and networking empires from scratch, as well as any number of "might-have-beens" who lose it all.

And for the same reasons that agricultural barons were not active in railroads, and railroad barons were not active in the development of the trucking industry, and even large mainframe computer companies did not dominate personal computer software (or hardware either for that matter), the winners in the Internet Service Provider business are not likely to be who you believe or fear they will be. It would almost make it easier if they were.

Despite the excitement and the opportunities, growth has its problems. How to cogently market Internet Services, how to scale an operation that originally served 150 people to one that can ably serve 2500 and then 25,000 people, technical issues, legal issues, legislative issues — they all may be interesting questions generally, but Internet Service Providers can't afford the luxury of idle theoretics. They need to deal with these issues NOW. How they develop interim answers and plans now directly affects their economic well being and growth prospects in the future.

John C. Dvorak will keynote the meeting. He's going to talk a bit about the role of Internet Service Providers and how they can secure their positions by adding value to their services through community building. He's also going to talk a bit about the very nature of information distribution and publishing in the future. Dvorak has established himself over many years as the number one computer columnist in the world, and undoubtedly the most accurate pundit /prophet in the business. He was heralding the communications aspects of personal computers in the early 1980's when everyone else was totally focused on word processors and spreadsheets. And he wrote the first really successful book on PC telecommunications.

We'll also bring in Mark Corbitt. He's the Chair of the Internet Task Force at the Federal Communications Commission in Washington DC. He has some fascinating ideas on developing universal access to the Internet and will be at ONE ISPCON specifically to talk about the Telecommunications Act of 1996 and its impact on Internet Service Providers. No single piece of legislation enacted in the past 50 years will change the landscape of telecommunications as much as this single law passed this past February. Yes, the Communications Decency Act provisions of this legislation are problematical, but they aren't even a minor portion of the change to the online environment enacted in the Telecommunications Act as a whole. You need to hear from this man. And he needs to hear from you. The FCC rulemakings over the next couple of years can potentially change everything about your business — opening up opportunities you hadn't even considered were within your grasp, or closing doors you thought you pioneered. A dialog is imperative.

Bob Metcalfe, columnist for ***InfoWorld Magazine***, has garnered some notoriety with his predictions of the imminent collapse of the Internet. He may be on to something. In any event, he is one of the best at attending a show and summarizing the tone and pertinent points coming out of it. Prior to joining the computer press with one of the best and most widely read columns in the field, he also invented Ethernet, founded 3COM corporation, and basically invented and promoted local area networking.

Tony Rutkowski, past president of the Internet Society and the current Internet guru at General Magic, will offer his vision of the future of the Internet. But there will be some exciting speakers from the smaller end of things as well. Sky Dayton is the head of Earthlink, one of the most dynamic startups in the ISP business. This 24-year-old entrepreneur has grown his ISP business to some 85,000 subscribers in the past 24 months and is currently adding 4000 warm bodies per month to his base. He will be at ONE ISPCON to tell his story. And we will have several ISP success roundtables manned by small entrepreneurs who have built successful businesses — to answer your questions directly on how they did it, what was important, and what wasn't.

Investment banker A.David Silver has written 27 books on entrepreneurship and capital formation. He engineered the sale of Net99 to AGIS and has worked to secure financing for 13 Internet Service Providers. He's going to do a session on twenty ways to raise capital to fund growth for your Internet Service Provider business.

Legal issues such as copyright, privacy, and increasingly trademark issues pose thorny dilemmas for almost everyone who touches them. We have assembled a small herd of legal beagles to discuss the latest thinking, representatives from the InterNIC, trademark attorneys, and others.

And there are technical changes that can dramatically alter the online world. Voice applications over the Internet may alter long distance telephony forever. Representatives from VocalTec, Quarterdeck, and the other major players will describe their vision of the future impact of these voice over net applications and how to get them to interoperate. We also plan a series of sessions on online electronic financial transactions — essentially digital cash and credit card technologies,

that will shape the future economic environment online.

Companies such as Microsoft, Cisco, and Intel have joined us with entire multi-session tracks to describe some of the new software and technologies that will shape the future network, both for ISP's and end-users. And hardware vendors such as Ascend, Adtrans, Bay Networks, Farallon, and Livingston are intent on showing you the way to handle more callers at higher speeds with less equipment, configuration, and operational effort. Some of this stuff is so new they won't even tell us what it is — until the show.

National backbone operators will be on hand to compare notes and describe in detail how to make the connection to the fastest and best points on the Internet — increasingly even smallish ISPs have more than one — multi-homing is very much in fashion. And we will likely serve as a virtual wedding chapel as two groups meet to marry — small, entrepreneurial rural phone companies and existing Internet Service Providers. We would predict they ARE going to get together to deliver Internet Services and it is quite likely that many of them will meet for the first time and start their courtship at ONE ISPCON.

We do intend a rather intense set of over a hundred educational sessions and seminars from the broad legal and social issues to very specific technical sessions on ISDN modems and large routers for ISPs.

So join us for the largest mass meeting of Internet Service Providers and related professionals ever gathered. If you are an Internet Service Provider, you probably feel you don't have time to get away for three days for such a meeting. But the information, perspective, and contacts gained at this one event may change your business plans forever — and toward their ultimate success in a very rapidly changing and competitive industry. From that perspective, you probably don't have time NOT to attend. For more information about the show, contact Online Networking Expositions, Inc. at **http://www.one.ispcon.com** or call **(303)693-5253.**◆

Jack Rickard
Editor Rotundus

LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, *Boardwatch Magazine*, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)933-2939 or by e-mail to letters@boardwatch.com

GATES

Oh my god. The Bill Gates cover layout was incredible. I will frame it and put it on my wall. I'm serious. Thanks for a great magazine.

Dan McDermott
dan.mcdermott@rma.edu
Director of Telecommunications and Information Systems
Randolph-Macon Academy
Front Royal, VA 22630

BillGatus of Borg

Hi Jack!

Your May cover graphic featuring "Billgatus of Borg" was a picture worth a thousand words! The information and insight presented in your accompanying article was totally world class! I'm writing to beg or cajole you into making this cover available as a poster (suitable for framing of course!). I'd extend my subscription, mow your virtual lawn, or simply buy the thing outright!

I'm hoping this note reaches you in time...I figure it won't be long before your fine publication is detected and assimilated (Borgwatch?).

Thank you "Jean Luc" Rickard!

—Rich Langsford (**rich@tacoma.com**)
Amocat BBS, Tacoma, WA

Gentlemen:

Thanks for the kudos. We've had more reaction to this cover than any we've done. We are looking at blowing it up to poster size and making it available at ONE ISPCON this August in San Francisco.

Jack Rickard

◆◆◆

Let's Build Our Own.

Hi Frank,

I read your article in the May issue of ***Boardwatch*** and I have a question about the "per minute of usage" you were talking about.If I read correctly the Bells are going to try and change LEASED T1 and T3 lines to "by the minute" lines? Are they going to meter the lines? In other words in a 24 hour period if I have 18 hours of packet transmissions they are going to break that down by the minute and charge me so much per minute?? And they are only going to charge this to ISPs? But the office down the street who may be using their T1 line to carry 20 voice circuits will not have to pay extra? And this is not racketeering to the American Government?

Are they going to charge extra for regular voice lines that a modem may be on? Part time? This is a subject that must be presented in depth in ***Boardwatch***, not just a "fluff" piece which creates more rumors than answers. What did the Bells in Canada actually do? What were their leased line rates, and how did they re-structure them to charge "by the minute"? And this was only charged to ISPs? Maybe it is also time to discuss what we can do about it.

Insane thoughts: Maybe an article on how to start your own "telco", force them to rent you space on the telephone polls so you can run your own wires. What do the telcos charge the cable and power companies for pole space? Could we run underground cables and by-pass the telcos? I know the expense would be in the millions, but maybe if we all joined together we could start our own nets and bypass the telcos. This may sound insane and unrealistic, but it is thoughts like this that make the world go around!

Steve
casey@intac.com

Steve:

There is more, and less to this than first meets the eye. First, all long distance carriers and telcos have said from the beginning that they wanted to put a meter on the Internet.

The Internet model was based on pipe size. To get into Internet Services and compete with existing vendors, they were forced to adopt this model. The variety of subtle ploys they have introduced to subvert this is enormously entertaining - though so far unsuccessful.

But the Telecommunications Act of 1996 opens the door to an enormous amount of potential change. In many ways, the telcos are freed to do what they want. In others, they face competition for the first time. The immediate effect is "the grass is always greener" effect whereby they simply cannibalize each other through mergers and acquisitions.

I would venture that the pipe model will prevail in a competitive environment. Basically, if anyone offers the pipe model, the buyer clearly believes that this model is to their advantage and the pipe purveyor will immediately gain market share at the expense of the penny-per-pixel crowd.

The trick is maintaining a competitive environment. The performance of the Internet is deteriorating alarmingly. And several large companies have plans in small and large ways to "corner" the market for Internet. Sprint is pulling a very interesting ploy of hooking up everyone in sight, but of essentially owning the IP numbers. At some point of market share, they could change the model, and any ISP or business customer who wants to change will face changing all the IP numbers on their network with horrendous operational disruption. Many of these companies think THEY own their IP numbers, but Sprint is very cunningly adopting some routing policies that can best be described as near Satanic.

AT&T intends to mass a large body of consumers on their network, and then persuade thousands of businesses to connect to their "better" Internet where those customers can access those businesses with much better performance than offered through the dirty old Internet. I rather applaud this ploy. Nothing wrong with offering a better product.

TCI similarly, is developing the @home service over cable TV with better performance, and a salutory link to the old dirty brand x Internet. If they attain sufficient mass, they will own the "good part" of the Internet again, and with an asymmetric delivery system, they will have a huge wedge to inspire businesses to host services on their network.

And so it goes. Large companies of tremendous resource with executives laying awake nights trying to figure out a way to have invented it all from the beginning and own it all in the future.

The counter movement is of course driven by thousands of smaller providers who can implement changes faster than the big boys can have meetings over them. And the FCC seems sympathetic to universal access through small providers. Ricochet is offering 14-28 kbps links to the Internet in the Bay area using a small radio modem that is very interesting. And the FCC just opened a rulemaking regarding the National Information Infrastructure (NII) band proposed by Apple Computer. This would allow unlicensed devices to transmit data at up to 24 Mbps at distances of 10-15 kilometers - effectively bypassing local telcos entirely. I think this is an incredibly promising area and just the sort of solution that the technoids at the heart of the network would just go crazy for.

As to wiring the land all over, it's not nearly as insane as you might think. The issues of interconnection, colocation, and regulatory relief are all being fought bitterly by local telcos. They will be resolved in a series of some 80 rulemakings by the FCC over the next two years to put in place the directives of the Telecommunications Act of 1996.

So I've actually been toying with the idea of taking a truck and a couple of spools of fiber, and going into some high density neighborhoods and hooking everybody up - television, Internet, switched phone - the works for $30 per month. How hard would it be for Gary and I to go out and actually run the wire? Not for millions of dollars, but for thousands of dollars. Everyone assumes it is impossible and terribly expensive. I'm not sure that argument is anything more than a paper tiger. And how many do you have to have to be viable? Would 500 houses be a start? Would you need 5000 to be viable? I think the two of us could connect 10 per day. In a little over a year, we could have 5000 households up and running with better connectivity at a lower price than they knew they wanted.

Ultimately, I am reminded of a BellSouth executive's comments regarding Personal Communications Services when we did our first story on it in 1989. He presented about a dozen different reasons why PCS was the wrong technology, that it wasn't needed, and that it would cause everyone endless grief. But he summarized his presentation by noting that if it WAS needed, Bell South was really who should provide it. Today, every RBOC has a PCS system in development. This is basically the approach the telcos use. If it wasn't invented here, it is not good and shouldn't be allowed. And if it is good, and it is allowed, they should own it. So they fight small entrepreneurs tooth and nail, stooping to tactics that would make Satan blush, including blatant bribery of government officials to enact laws to protect their markets. Finally, if they lose, they simply buy the winner with cash and "assimilate" them. It's ugly, but I guess it works.

Ultimately, I have a good bit of faith in the long term success of competitive markets. In 1984 we split our telephone system into two pieces - the regulated local monopolies and the competitive long distance companies. Since then one has offered better services at lower prices, and the other has offered lower services at higher prices. If you don't know which is which, you will have trouble with the future telecommunications world.

We'll have Paul Corbitt, Chair of the Internet Task Force at the FCC, at ONE ISPCON to talk about some of the issues facing Internet Service Providers in this area - as well as some of the opportunities.

Jack Rickard

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BUGS IN YOUR WEB

It seems that your April issue of ***Boardwatch*** Online 1996 says it is the May issue, All the links claim this but the text for all the articles are from the April issue.

I am a subscriber to your printed magazine and enjoy using your online version at work since my office does not subscribe yet (I am working on them).

In my opinion you run the only real Internet Magazine of any worth. I subscribed several years ago to keep up on bbs stuff (I run the Little Apple Bullet BBS - **bbs.ltlapple.com**) and have enjoyed your magazine ever since.

Lhavenst@ltlapple.com

I think you've rather caught us in the process of building the May issue, but I'll check the status of April vs. May. We do a new one every month.

We counted 24 Internet magazines at Internet World in April. It's gotten to be a bit of a crowded field. We appreciate and share your opinion.

Jack Rickard

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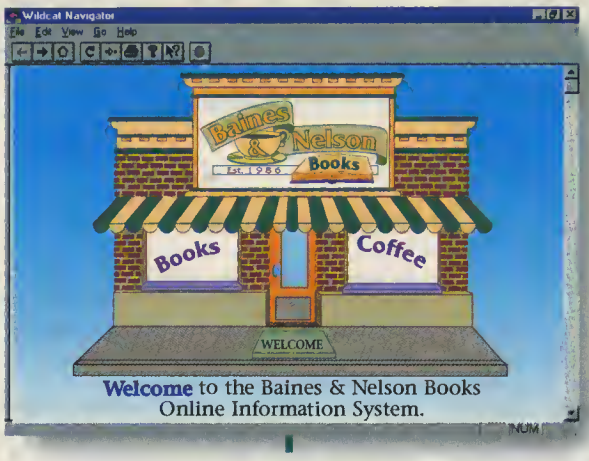
MATURE WEBMEISTER

I don't know the name of the young man who called me back about my message of April 24, so I cannot thank him by name. Please do it for me. I am embarrassed and appreciative both. I like your magazine and would have missed it, but I am bothered that frailties of age would have put me in the position of not understanding what I was hearing.

You may wonder what a seventy-year-old is doing with your magazine. I suspect there are a lot of us, as I have seen statistics showing that the older population is not that far behind the times. I am saddened when I learn of young people who refuse to get involved with the computer world. Some day they will be sadder and wiser.

My primary use of the Web is for genealogical purposes. I learned how to do my page from your magazine, plus some hints elsewhere, but mostly from Michael Erwin's column. We live out here in the sticks, so it wasn't until the middle of March that I was able to locate a server where the connection could be made on a local call at a somewhat reasonable price ($19.95/mo with a discount for multiple months for unlimited hours). That includes a page. Check mine out: **http://www.discover.net/~rowleytw/**.



Why settle for a you can have the

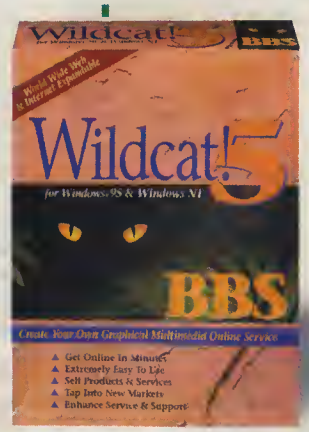
Open up to a new chapter in online systems: Wildcat! 5 for Windows 95/NT

Customers can check an event schedule for book signings and other happenings using a custom system designed with wcCODE.

Baines & Nelson created its own book reviews and links to book publisher Web pages right from Wildcat!

A moderated teleconference system lets Baines and Nelson hold online question and answer sessions with local and celebrity authors.

Customers can check Baines & Nelson's inventory and order products using the Wildcat! ODBC add-on.



Are you considering the World Wide Web for your online needs? Consider this. A web site is great for viewing documents, but your own online service can give you more. Messaging. File management. Interactive teleconferencing. Data security. Your own online community where members want to visit and come back again and again. But where do you turn to get your own online service?

Turn to the company that's been creating online software not for 10 months or 10 weeks, but 10 years: Mustang Software. Then open up to a new chapter in online systems with the power of Wildcat! 5 for Windows 95/NT. It's a 32-bit online information system that combines the browsing ease of the Web with the powerful features of a bulletin board: the ultimate information server. Wildcat! has the power to provide an online solution for nearly any type of business wanting to get on the information superhighway. ***See how our fictitious bookstore, Baines & Nelson, uses Wildcat! 5 to create its online presence.***

Wildcat! gives your members access to information through modem, LAN, WAN, and the Internet.

few pages when whole book!

With Wildcat! Baines & Nelson's customers can send and receive e-mail quickly and easily.

Message Conferences

Wildcat!'s message conferences are similar to forums found on the larger online services like CompuServe. Each conference can have its own message base, files, bulletins, questionnaires, display screens and menus.

File Management

You can make documents, spreadsheets, databases and other files available through Wildcat's file management system. Searching and retrieving are as easy as pointing and clicking on an icon.

Search Baines & Nelson's archives with the Wildcat! file management system.

Security

Wildcat! gives you the power to define exactly which files, messages, and menu options your members can access. It's ideal for supporting different departments, offices, and even entire companies.

Free Wildcat! Navigator

The free Wildcat! Navigator gives your members access to services through modem, LAN and the Internet. Its point and click operation lets members browse your online service by selecting hypertext regions and icons.

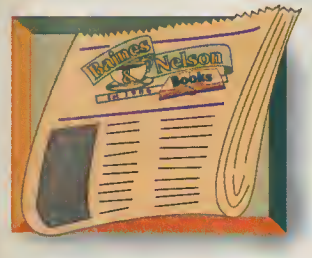
Baines & Nelson expanded its customer service lines to include 24-hour contact via e-mail and real-time access through Wildcat!'s chat system.

Teleconference/Chat

Wildcat's real-time teleconferencing provides an exciting way for members to interact one-on-one or in groups. Moderated chats give members an organized forum for group discussions or question and answer sessions.

World Wide Web Interface

The key to Wildcat!'s ease of navigation is its use of hypertext markup language (HTML). This is the same language used to create pages on the World Wide Web. Future versions of Wildcat! will include support for full-motion video and Virtual Reality. With the Internet Connectivity Package, members will even be able to navigate the World Wide Web through your Wildcat! system.



Using the included HTML editor, Baines & Nelson easily creates news pages and bulletins to keep their customers up to date on bookstore news.

Polls/Questionnaires

One of the best ways of gathering information is through Wildcat's questionnaire interface. It's powerful and flexible enough to quickly gather demographic and marketing information and even process online orders.

So why settle for a few pages? With a world of connectivity and powerful options at its disposal, Wildcat! is truly the online solution for your business. To experience the Baines and Nelson Book Store for yourself, download the Wildcat! Navigator from Mustang Online. You can reach us at telnet://bbs.mustang.com, http://bbs.mustang.com, ftp://bbs.mustang.com, or through modem at 805-873-2400. If you'd like to discover how Wildcat! is creating online solutions for companies, call our Solutions Office at 1-800-807-2874 for a free consultation.

Wildcat! 5 Add-ons:

- Internet Connectivity Package
- Internet Service Provider Package
- Microsoft Exchange Gateway
- wcCODE Development Language
- Wildcat! Billing
- Bulletin Board Source Code
- ODBC Database Support
- Wildcat! Reports
- Software Developer Kit
- And Much More!

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I surf around getting news and we love the Web Museum and all the artwork. The Rand organization (yes, the research people) maintain a genealogical page. It seems their employees are into genealogy, so they have set up a "roots" cellar listing 92,000 surnames and 6,000 people that are researching those names (a couple of weeks ago it was 86,000 surnames). **http://www.rand.org/personal/Genea/** is the URL of the group.

I probably spend at least 3-4 hours per day, most days (or rather evenings) on the Internet. Is it paying off? Absolutely! I have been doing this for about thirty years. Within two weeks of getting on the Web I had a stack of material mailed to me an inch thick with lots of new information. On the one family alone we have a network of six people trading information. Others I have spoken to have had similar experiences. I suspect I have well over 200 e-mail messages in my folders. Before that, I might write one or two letters a month. This is so great to be able to sit at the keyboard and tap the "send" key and be done with it.

Anyhow, keep up the good work. It's a great magazine, and the close personal involvement of Jack Rickard shows.

T. W. (Tedd) Rowley
rowleytw@discover.net
http://www.discover.net/~rowleytw/
Rowley Genealogy

Mr. Rowley:

Actually, it is hardly news to us that indeed there are a number of mature and "seasoned" Internauts. We did our first story on SeniorNet in 1990 and David Hakala reprised the topic in a recent issue. And while I have not myself reached your advanced stage of survivorship, I'm not as young and pretty as I once was either. It is no small comfort that I can rattle around this venue for plenty of time yet to come.

I'm pleased you found a way to make able use of this network, and more pleased yet that Boardwatch provided any assistance in this endeavor.

Jack Rickard

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JURIS, INC. SOFTWARE MANUF. AFTER MY DOMAIN! HELP!

Dear Jack:

Thanks for your editor's letter of March 1996.

The Domain Name Problem not only gets worse, it gets much worse! Now I'm mad as hell and I'm going to do something about it. Enough is enough. And I am furious!

In 1993 my partner, Rene Thomas Folse, J.D., and I started a BBS using Galacticomm's Major BBS. We went whole hog building a center for legal information and research. We bought lots of add-ons, went to the first One BBS Con (where we briefly met you and heard you speak) and went on to install a T-1 line into our office, giving us an onramp directly to the backbone of the Internet. In 1994 our BBS, juris.com, went on the Net.

When we first did our name search with InterNIC, Rene wanted law.com, but found that it was already registered. He then tried for legal.com, but it too was already registered. We then went for the next generic name we could think of for law: juris. Thus, juris.com was born. We built a web site which is now at www.juris.com. Rene spent hours of joy seeking out and linking the site to all of the law schools and legal information sites on the Net.

We were moving along, happy as clams and as pigs in the slop, until Juris, Inc. showed up with a registered trademark. We had never even heard of them. Their President, Tom Collins, asked us to give him our domain address in exchange for a tee-shirt and a mouse pad with their Juris logo on it. After some correspondence between us, he mailed a copy of his trademark to David Graves at Network Solutions, who in turn mailed us a letter with his policy enclosed. We received this letter on Christmas Eve 1995; after I read it I hastened to the nearest bar and ordered a Tom Collins.

We are now in full-blown litigation. Juris, Inc. is a manufacturer and distributor of software, and we are a legal BBS and Website of information and research which also provides email services to lawyers. N'er to our paths entertwine.

To help fund our litigation I have set-up a fund called: Domain Defense.I am asking sympathizers from all over the Internet to please help by sending contributions of **$25** or greater to: Domain Defense, c/o 25th Century Internet Publishers, 101 Moody Court, Suite 205, Thousand Oaks, CA 91360.

I would deeply appreciate your assistance in putting the word out on theNet and by providing any press you can give us..

My associate, Rene Thomas Folse, BBSer and Internet guru, is at **rfolse@juris.com** (or telnet to **juris.com** and write sysop) or call him at **(805) 449-1388** ext 104.

Thank you for your attention.

Yours truly,

Lonce L. LaMon
owner
25th Century Internet Publishers
llamon@juris.com
(805) 449-1388 ext 132 (voice)

Happy to put the word out Lonce. The domain name issue continues to grow. David and I are thinking of putting together a regular column of domain name battles. And as predicted a couple of issues back, Mr. Graves is having a very bad hair day almost every day. We hope to have some InterNIC representation at ONE ISPCON to help clear away some of the smoke.

Jack Rickard

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CONFIGURING WINDOWS 95 FOR A DIAL-UP INTERNET CONNECTION

Dear Jack:

Thank you for your article in the Spring 1996 BoardWatch on configuring Windows 95 for the Internet. Everything worked perfectly with one exception. You indicate on pp. 41-42 that one may have to write a logon script. I do. But you indicate that to do so one needs to use the DIAL-UP SCRIPTING TOOL provided with the Microsoft PLUS CD-ROM. I purchased the CD-ROM and much to my surprise and disappointment there is no SCRIPTING TOOL. Has Microsoft stopped distributing the program? Did I do something wrong installing the CD-ROM? Is there an alternative way to automate the logging on procedure? Anxiously awaiting a response.

I do appreciate the clarity with which you write your articles. Thank you.

Thomas P. Walters, Ph.D.
tpwal@psci.net

Dr. Walters:

The scripting tool is listed as an ACCESSORY on the PLUS CD-ROM and is perhaps non-obvious. You have to checkbox this accessory to add it to your system and then run the installation. Microsoft also makes this tool available on their web site at **http://www.microsoft.com/isapi/support/bldqpage.idc?ProductPage=q_misc95&ProductTitle=Windows+95+Miscellaneous+Files**. *It is titled SLIP AND SCRIPTING SUPPORT FOR DIALUP NETWORKING.*

Perhaps more interesting, Microsoft now offers the Microsoft Internet Mail and Newsreader 1.0 (Beta 1) on their web site at **http://www.microsoft.com/ie/platform/imn.htm**.

Jack Rickard

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ADSL NOT ISDN

Hi Jack,

When you wrote "ADSL", I was prompted to respond. From what I understand about 5% of the cable systems are not capable of two-way transmission. Even if 50% had the feature, cable is still not as densely populated as copper. The last mile! This is the only saving grace for most of these Baby Bells, to collect for analog voice communications (Tip and Ring). Thank god they have this annuity, because, without it, I doubt they would last very long on their competitive spirit. Exhibit A- ISDN.

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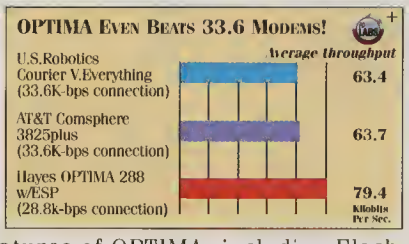

In addition to the performance features of OPTIMA, including Flash ROM, Caller I.D. and distinctive ring, the Hayes Century 16 gives you a fully populated 19-inch rack with 16 line cards, chassis, power supply and LCD control panel. The Hayes Century 8, with its small footprint, comes fully populated with 8 line cards, chassis and power supply.

For more information on our complete ISP/Sysop product offerings, contact Hayes web site at http://www.hayes.com or Hayes Online BBS at 770/446-6336.

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*Tests conducted by industry publication labs. +Reprinted from PC WEEK September 18,1995. Copyright(c)1995 Ziff-Davis Publishing Company. *Call Hayes Online*: 770-446-6336, Hayes Worldwide Web Site: http://www.hayes.com or Telnet to "hayes.com". ©1995 Hayes Microcomputer Products, Inc., P.O.Box 105203, Atlanta, GA 30348. Hayes, the Hayes icon and the Hayes logo are registered trademarks, and Increasing the Speed of Business, OPTIMA and Century are trademarks of Hayes Microcomputer Products, Inc.

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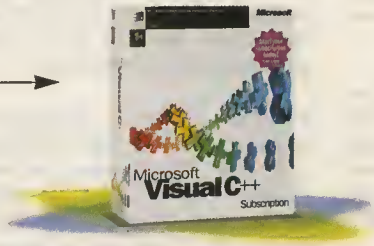

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WHERE DO YOU WANT TO GO TODAY?™

Why ADSL? Because you get POTS with two way high-speed digital service thrown in. Without any changes to your existing copper pair. Just add a box to the incoming pair and split off the results. There is even a filter to isolate the POTS so that if the digital piece fails old faithfull will still keep gushing analog service, as I understand the way it works. This is key! Do you have any idea what it costs to pull copper in some places like New York City and large apartment buildings. Don't ask. (Aside: Before 10Base-T was adopted as a IEEE standard, 3Com and Digital were promoting a 2-wire single pair cable plant using pair tamers, a box that converted one pair of copper to 10Base-2. It was a big hit in NYC, and other urban centers, because it conserved precious copper pairs.)

I think ADSL (or a cousin: HDSL, VDSL, or SDSL) is easier to implement at the central office because unlike ISDN, it requires less equipment and really integrates right into existing hardware. Also, unlike ISDN, the service has a fixed price rather than ISDN's rate, which charges by the shot glass.

Jack, after playing with VDOlive and Xing's Streamworks video players, I can tell you that ISDN is too slow. You know, I hear many people discuss this issue and profess that we should not worry about the infrastructure, and its the "last mile" that is important. I say, the last mile is close at hand and will generate a mini revolution in telco equipment. A good thing for a change, if we can keep Washington's hands out of our pockets while this industrial revolution is raging. No, its the infrastructure I am worried about. Even with high-speed transmission to all our homes, this will not guarantee timely deliver of data for voice and video. We need isosynchonous transmission so that frames arrive in time and congestion will not interrupt smooth delivery of packets. Today, these streaming servers are bending the existing architecture, which is already too brittle. One example is M-Bone, which is cleverly spoofing Internet's unicast routers by tunneling multicast packets. One big first step would be acceleration of the roll out of IP6 with Multicast routing built-in.

Next, there must be standards to control the quality of service from all the lego parts that currently make up the I-net. While this is happening, ADSL should be deployed everywhere possible.

Yak! yak! yak! I'll shut up now.

Almost forgot. Go to this site to read about GTE's trials for testing ADSL. Is it going to be AMATI (inventor of the ANSI approved signaling method, or one of the AT&T Paradyne modulation methods (Westell). The players are Westell, Amati, Pair Gain, Performance Technology, and Aware.

http://wcn.gte.com/adsl/

Great article. It sure got me out of my rocker. <g>

Alexander Safer
Safer@worldnet.att.net

Alexander:

The problem is that technology is evolving rapidly, and deployment is evolving on a much more Darwinian pace. ISDN was very sexy when first described in 1978. It's still not every well deployed - not just not universally, but it isn't available at all in some areas of the country. Now we have ADSL. Actually, NOW we have "VDSL" as well. I'm not even certain what the acronym stands for, but it is an evolutionary step from ADSL and they are claiming 20 Mbps bi-directionally over standard copper at distances up to 1000 feet. Broadly, the advances in speed, signalling, and compression are such that ordinary copper may be sufficient within a few years and the entire debate about deploying fiber will be moot.

But while there is no shortage of technology, there is a big shortage of ability to deploy it. U.S. West, for example, just doesn't want to do ISDN if they can't get penny-per-pixel pricing or $180 per month. And they can't. So in a kind of odd dog in the manger stance, they appear ready to stand there and let new competition into the market at a fraction of that. At the same time, they ARE starting a beta test of ADSL in the Denver area.

We'll see what happens. But I'm confident that consumers will have much higher speeds to the Internet soon. We're seeing some fascinating please).

In the editorial, Jack took the risky stance(for a magazine) of supporting the Telecommunications Act, and praising it as one of the greatest reform bills ever seen. In addition, they gave AT&T major press in this issue, praising their free internet offer nationwide(another risky stance).

Not that I entirely disagree with him, but I feel he is SERIOUSLY alienating his complete readership and catering major corporate advertising dollars.

Who reads Boardwatch? ISP's, System Operators and Administrators.. Very few regular users bother with it. Who stands to lose the most with companies like AT&T pushing their way in? ISP's, System Operators and Admin...

Mr. Rickard seems to think that AT&T won't effect anyone, and that it will get very little notice in the public eye.. Rickard obviously hasn't been watching AT&T spend Millions a year on advertising. All the while, Rickard is giving them shelf space in his magazine "Making sure" everyone knows about AT&T.

Hmm.. Maybe he should rename ONEISPcon to ONEAT&Tcon..

Robert McNaughton, CEO
bob@pc2.advonline.com
Advantage Online Systems

Robert:

Get a clue big guy. There is nothing in my job description about becoming the most popular, best loved guy on the Internet. I suppose if we DON'T mention AT&T, they will have a board meeting, complain about not making it into the pages of Boardwatch, and fold the project? They'll go away and not bother the Internet again if we don't mention their name? Get real.

I know very well who reads ***Boardwatch****. And I also know they need to know what is going on in their world. If you want happy talk about how neat the Internet is, there are a number of other publications catering to that as hard as they can. We don't coddle the readership here, and with good reason. They're rather demanding of the straight stuff, without the candy coating.*

To my knowledge, AT&T WorldNet is not participating in ONE ISPCON or advertising in ***Boardwatch*** *Magazine. They are perfectly welcome to do so, but it is a pretty unlikely mission objective here.*

In truth, I think AT&T WILL affect a lot of people. I think it will closely reflect the impact of Prodigy, when it was introduced, on the then BBS community. AT&T's entry will lend a lot of credibility, expand the market for Internet Services exponentially, and be in most ways a windfall to ISP's such as yourself actually. It will bring thousands and potentially hundreds of thousands of new people into the Internet. Some of them will bounce twice and move on to an ISP such as yourself. But the lame and fearful will have plenty to limp and wail about if they read it wrong.

The Telecommunications Act of 1996 will also profoundly alter the landscape you operate in. And while I didn't vote it into law personally, I'm aware that a head in the sand oblivion won't make it go away either.

Jack Rickard

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NEW SUBSCRIBER

Jack

I'm new to all this and your rap is the best I've heard. Comp copy sold me. I have a touchy business and have no time for bullshit! Thanks :) **http://www.teleport.com/~tricipe**

tricipe@teleport.com

I understand. Pleased we fit the bill.

Jack Rickard

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REASONS FOR NOT RENEWING

Hey Jack:

Thanks for your renewal message. Of all the renewal notices I've received over the years from various magazines, yours actually almost made me renew my subscription. But when it came down to it, I decided against renewing. And since you said you wanted to know why, I thought I'd let you know.

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As I gather from the letters you print, not everyone agrees with your politics. And I have to say that I've found some of your views pretty hard to swallow sometime. Hey, but you probably wouldn't agree with my politics sometimes either - that's life in the big city. As exasperating as you have been on some topics, I wholeheartedly agree with your support of the rough and tumble that comes with free expression. Although, as a bleeding-heart liberal, I admit there are some discussions I'd like to see stifled. But I'm prepared to live with that crap as the price I'm willing to pay for the excitement and creativity that unfettered thought can generate.

But all of this has nothing to do with the ultimate reason for not renewing my ***Boardwatch*** subscription. Up until three years ago, I was just your average BBS user. But then we decided to set up a time-limited bulletin board for customer support on a special project we had with a client. I happily took on the job of setting it up and guiding it through the inevitable crashes and disasters that come with anything new. I heard about Boardwatch from a friend who suggested it might keep me in touch with developments and was essential sysop reading material. Boy, was I glad when I got the first few issues. The information was just what I needed, when I needed it.

After almost three years, our bulletin board now just winding down with the completion of the project and will likely be given a bittersweet burial later this month. We had a choice - to transform our BBS in some way and with some purpose to fit into the new Internet world, or to simply call it quits. We relied on the comments and suggestions we found in ***Boardwatch*** on the subject over the last two years to help us reach our decision. As a small company, we felt the demands and financial commitment was just too great to justify continuing without some clear vision of exactly what we wanted to do with it. Since no brilliant ideas come forward, shutting it down seemed like the only alternative. We may yet regret the decision, but I think we haven't enough creativity (nor quite frankly, time and money) to justify such a transformation in our small business. We will have to be content to be one of the followers (rather than a leader) on this one.

With the demise of our bulletin board, I now get to return to being a casual yet committed user of both bulletin boards and the Internet. With the exception of Babb's Bookmarks, most of Boardwatch now gives me much, much more than I need. All the technical stuff, all the news about new gizmos are interesting to a degree, but not interesting (or necessary) enough to renew my subscription.

I will miss your editorials - which was always worth the read. I'll probably also miss getting steamed by some of your bone-headed comments to the letters your receive - but I can probably get over that!
So that, by way of a very long-winded explanation, is why I'm not renewing my subscription. You asked for it!

With best wishes for continued success for both you and ***Boardwatch***,

Greg Kozdrowski
gregk@trends.ca
Avebury Research & Consulting Limited

Greg:

Thanks for writing. I understand your position and reasons, and actually do feel some sense of personal loss at losing a reader of three years. Further, I'm enormously flattered to have had your attention these past three years. There is no shortage of things to read, both online and off, but there is a terrible shortage of personal time for us all. That we had a bit of yours on a monthly basis for over three years is enormously gratifying.

Having watched many individuals leave this field over the years, I just have one closing observation...

... you'll be back...

I do hope you'll rejoin us as a welcome member of our readership at that time.

Jack Rickard

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Attaboys

This message isn't necessarily for publication, nor does it really need a reply, being Yet Another
Attaboy (YAA).

Just wanted to say how useful, informative, and entertaining I have found BOARDWATCH to be over the past few years. I've been a newsstand client rather than a subscriber (which I know yields less dollar return to you the publisher).

I get a hell of a kick out of reading your editorials - no sacred cows in Mr. Rickard's book, just your basic shoot-from-the-hip tell-it-like-it-is prose from a real visionary with a true love for his subject. I do appreciate that, especially in today's "let's have the attorneys vet it for anything potentially offensive" sugar-coated world of publishing.

My favorite columnists are Dvorak (most of the time - some of his stuff is too wacky for me), Rose, and Babb. There are others who deserve kudos I'm sure but these are the ones who come readily to mind.

Okay, almost enough admiration here. But finally, I'd like to congratulate you on your wonderful web site - full text AND graphics of the ENTIRE magazine! I'm sure the other publishers are scratching their heads wondering why you'd work so hard to lose a certain amount of mag sales. Let 'em wonder, hmm?

Thanks again, to you and your entire staff. I think I'll bite the bullet, go ahead and order that subscription.

Sincerely (and I mean it!)

Bryan Lockwood
bryanl@gears.efn.org

Bryan:

We're most pleased to have you join us as a subscriber. The full text and graphics web site is no mystery here, but you are quite correct in that most of the other publishers don't quite get it. I occasionally, when questioned, actually explain it to them. They assume I'm either trying to mislead them or have abandoned my senses. But having had full text of Boardwatch up online since January 1988, I don't have to theorize very much.

Most publications, niche publications particularly, do a pretty good job of editorial, and a terrible job of arithmetic and of realizing their place in the world. A publication occupies a specific place in the universe, and provides a specific service to the reader. The nature of publishing is such that any attempt to be all things to all people ultimately results in a publication of little use to anyone anywhere. For the past twenty years, the trend has been toward more specialized publications, and with good reason. The heart of it is time. People have a limited amount of it. If you can aggregate specific information in a single place, then by reading your publication your readers SAVE time - if that information aggregated is information they need to do what they really want to do - which rarely is reading magazines. If it is information they don't need, or is just more general pap, you have COST them time. A publisher basically winnows through a hurricane of information, and selectively filters and retrieves it for their readership.

Intrinsic in this is that it must be specific information, for a specific readership. Now to the numbers. There are 263 million people in the United States alone and virtually all of them read stuff every day. So why would the LARGEST circulation personal computer magazine top out at just over a million readers? Because the large bulk of the national readership could care less about what they are printing. The marketing of publications is the art of making as many people aware of your publication as possible in the hopes that those who do have an interest and need for that information can find you. The uninterested or non-interested you don't even WANT as a reader. They do you and your advertisers no good at all, and simply serve to clutter up the mails with magazines that are sent but never read. The biggest criticism I have of much of the magazine industry is the fact that they get most of their readership from Publishers Clearinghouse, and deliver those readers to advertisers presenting them as interested industry participants when actually they are very interested in winning sweepstakes. I consider it fraud and refuse to participate.

We put ***Boardwatch*** *up on the web totally free of charge and without any cute comeons. You can subscribe online, or you can*

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read it and move on. Being a human being, it wounds me emotionally that anyone would read this material and fail to fall swoon into a dead faint of magazine worship. But in truth, for the great body politic, even for the great body politic online, ***Boardwatch*** *just isn't for them. It costs them time rather than saving them time. In this way, they can become AWARE of it at no charge. And if it isn't for them, they move on at minimal cost to ME. If Boardwatch does provide information they find useful it is SAVING them time and effort. And the $36 subscription charge is absolutely trivial on that scale to get it in the mail where they can read it at their leisure wherever and whenever they want, take it to meetings, use it to confer with others, and occasionally wipe up a pet mess with. The web lets us make more readers aware of us at a cheaper cost than any technology we've ever found. And a sufficient number of those becoming aware become "engaged" with our information that they think nothing of subscribing to the magazines. The net effect: we get MORE subscriptions than we otherwise would - not less. And markedly and measurably so.*

What of those who read it and don't subscribe? They did not find it of sufficient value period. That's an emotionally difficult thing for a publisher to face. But it is the bare and naked truth so lets get with it. Had we done better, we would get more. Some will read it online regularly just to avoid the $36 subscription fee? Not as many as you think. The $36 isn't worth much. The time is. And those who have trouble scraping up the $36 to read Boardwatch without the hassle don't form a particularly attractive demographic to our advertisers, who do fund most of the publishing costs. Mostly, the reading process from a computer screen is really quite different from a printed publication. We can get at most two column inches on a screen. Reading is not nearly as serial as you might imagine. You turn pages, refer back and forth to graphics and ads, and generally the world just doesn't work very well top to bottom in linear scrolling fashion.

The result is that we get a subscriber base truly comprised of the movers and shakers in the industry. The people that are doing things and planning things and building things. We fail to get all 263 million, which we knew we were going to fail to get anyway. And instead we get the readers that we can provide the most value to. We get the Bryan Lockwoods. And he gets us. It's very nearly a thing of beauty. And I'm not really giving away anything at all.

Welcome

Jack Rickard

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ONE BBSCON

Is One Inc. putting an end to BBSCon and now doing ISPCon? Say it ain't so Jack ...

I loved the one you and Phil hosted in Tampa, even if Phil was rude to me. I learned so much. You gave me good advice when I approached you on the floors. If its so, I'm sure I'll learn a lot at this years One ISPCon. Also, how can I get information on it? I got sent something but it promptly disappeared under a mess.

Sincerely,
Acton Gorton
gorton@netdoor.com

P.S. if its not to personal, what was the price range of your hummer?

Acton:

It is so friend. Most of our attendees are now Internet Service Providers and 42% of Internet Service Providers were operating bulletin boards within the past two years. We have to follow. I think we have the best show we've ever done coming together in ONE ISPCON scheduled for August 7-10 in San Francisco. You can get more from **http:// www.one.isp con.com** *or call the OINC office at* ***(303)693-5253****.*

I can assure you that if you found ONE BBSCON in Tampa interesting and of value, the ONE ISPCON in San Francisco will be more so, and a lot cooler in August.

The Hummer is a hardtop wagon - loaded. They run about $80K currently.

Jack Rickard

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LETTER TO EDITOR, REGARDING HAKALA'S APRIL CDA ARTICLE

Dear Mr. Hakala... I read your April 1996 ***Boardwatch*** column with interest. You might want to know that the American Library Association has also joined in the suit challenging the CDA ... Librarians have always been very concerned with the freedom of information in all forms.

My main reason for writing, however, is to ask if your reference to "Mary Granger" one of the "founders of Planned Parenthood" (p.44) is perhaps a typo for Margaret Sanger, the well-known advocate of birth control and sex education of the early part of this century, who *did* found Planned Parenthood. If this is so, would you please correct this in your next column?

Thank you for your help.

Sincerely,
Jean L. Cooper
jlc5f@virginia.edu
70253.1114@compuserve.com
JLibrarian@aol.com

Dear Ms. Cooper:

It was a memory glitch, not an input error, that scrambled Ms. Sanger's name. Thank you for resetting my system!

David Hakala,
Editor at Fault

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YOUR WEB SITE

Hi Jack

I finally subscribed after buying "BoardWatch" for three years. Recently while reading the current issue (April) there was a reference to a column in the Feb. 96. issue. I went looking for mine, I mean everywhere.

Turned out I missed that issue. Seemed like the perfect time to check out the issues you had said were being put up on the Web Site. During the registration process, you were wondering if your effort was worth it, or if anyone cared etc.

Well, it made it possible for me to have a look at the Feb. 1996 issue. And for that I am grateful. A pile of work, but a nice job. I guess it goes without saying everyone in the office is made to attend M. Erwin's Publishing courses. ha ha BTW, do you have back issues for sale. Please keep up the great job at ***Boardwatch***.

Regards
Douglas Essery
doug@osha.igs.net

Douglas:

Very pleased you found it of use. Our regular readers do seem to find the full text keyword search and back issue archive of the web useful. We do have a limited number of back issues of the printed magazine available at $7.95 mailed first class.

I guess someone cared...we'll keep doing it.

Jack Rickard

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IN MY HUMBLE OPINION

I a big fan, blah blah blah.

Before I get into what I wanted to write, I just wanted to point out a correction in the April issue. In Frank X. Sowa's "Cyberworld Monitor" article about Carnegie Mellon, he writes, "... the extermination of 2 million Jews .." Obviously, I shouldn't have to point out the error.

Alright, now the good stuff. I've been a fan of your magazine for about 2 and a half years now (and I'm only a high school senior, impressed?). In my earlier days, I also bought some of the other publications focusing on BBSes, but Boardwatch rose to the top in no time as my only subscription.

I have watched the magazine change from focusing on BBSes alone to almost entirely focusing on the Internet. What I'm getting at is that you are selling your self short by keeping the name ***Boardwatch***. I know it's

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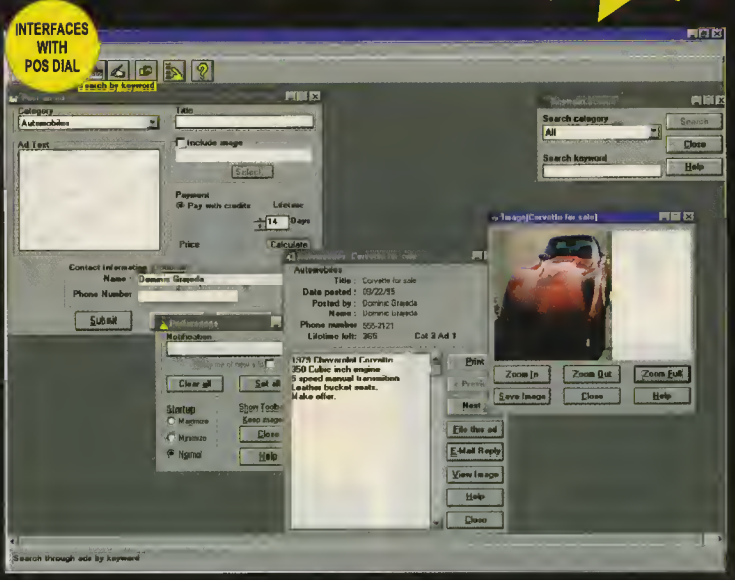

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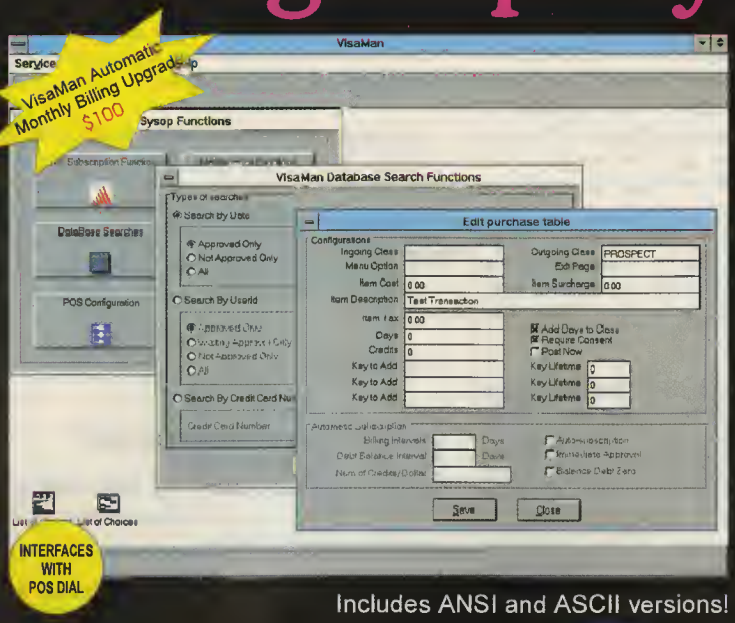

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a royal pain in the ass to get a business name changed, but I think it could be worth it. Changing your name to something more general to include BBSes and the Internet would attract the millions of people who are now finally tapping in. Even though your publication is too straightforward and logical for the average AOL moron, they would still wait for the next issue, if not for anything else, for Consummate Winsock Apps and Babb's Bookmarks. With a name that is related to one of the hottest topics in America today, you're bound to have more shelves stocked, and as a result more subscriptions. And one final note, the name might be misleading for anyone still looking for a BBS oriented magazine (if there are any left).

Ira Weissman
ibw@hs.wisenet.com

Ira:

Thanks for writing, blah, blah, blah..

*We've had the **Boardwatch** name for a long time. I like it. I'm sure you are correct that we would do better with a different name. I'd rather rely on the content of our character rather than the color of our skin for commercial success. We've covered the online community in all its forms from the beginning. We absolutely had the earliest and best coverage of the Internet than any other magazine starting in April of 1989. By 1990, it was in every issue and usually a cover story. We did it then under the **Boardwatch** name. We do it now under the **Boardwatch** name. I fear if we changed it now, it would confuse loyal readers into thinking we were just another feel good "golly isn't the Internet neat" magazine of which there is no current shortage. We'll ride it out.*

Jack Rickard

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MORE GUSHING PRAISE FOR BOARDWATCH

Dear Jack:

I'm finally sitting down to write this note which I've been meaning to do for months... First, let me explain briefly why I'm writing and some brief background.

I've been in the PC biz for nearly eight years now. I've made a living servicing, repairing, networking, programming etc. I've actually managed to survive in rural Alabama running my own business (Computers Mean Business, Inc.), for nearly two years. After moving to Alabama with a bad AOL habit and no local access, I began to dream, then I found BoardWatch. I attended ONEBBSCON in Tampa, last August. The result in November was "DIXIENET.COM" a dial-up BBS, based on Galacticomm's WorldGroup with Vircom's TCP/IP stuff, and a 56k pipe from DataExchange. It all worked from Day One and we haven't had any significant down time yet! I attribute this to many hours poring over your magazine and ONEBBSCON. We are not quite "profitable" yet, but we are working on it. Feel free to drop in on us sometime. We don't have a lot of content, yet, mainly we have focused on being an "onramp" to the fabled "superhighway".

I'm hoping to be able to come to ISPCON in San Francisco but I don't know if I can afford it (yes I'm whining). Hey, to get to BBSCON I drove all night, stayed in Motel 6, Tom left the light on, & then paid for access to the exhibit floor, then drove back. (It wasn't me listening at the crack in the door to the conference rooms either, that was an AT&T executive). Being that you chose a West Coast site that plan won't work this year. Remember that a lot of us are on the "tiniest" shoe string.

One suggestion I have, how about a section in your magazine covering what some of the BBS companies are doing... Galacticomm, Mustang, etc. >From an ISP standpoint that's more important than AOL or Compuserve. I have to resort to reading the ads over and over again (to see what they don't say) like all the other PC magazines. Hey, I didn't mean for that "other magazine comparison" to sting too badly.

I really enjoy your editorials and I look forward to meeting you, if I can make it, to San Francisco. By the way, I'm not afraid of AT&T, BellSouth, AOL, Compuserve etc. The one thing I fear is someone locally reading and understanding BoardWatch! So keep up the good work, catch you online.

Frank Whidden
Sysop@dixienet.com

Frank:

I'm preparing a series of maps and diagrams of the various national backbone providers for our second Directory of Internet Service Providers. It is actually quite interesting and I think the resulting view of the Internet will be very interesting. While doing it, I read about the start of the Brown Telephone Company in Abilene Kansas just before the turn of the century. It sounded like your story. They're known as U.S. Sprint today.

My guess is that Galacticomm is trying to figure out the quickest way to go out of business. We've received no product announcements from them in several months, they've pulled all advertising, and rumor control central has it that someone has infused some $16 million into the company, fired ten of the top executives, and is cleaning house in a pretty Major way - so to speak. By way of e-mail, former Galacticomm CEO Scott Brinker informs me that everything is just rosy and their WorldGroup 2.0 will fix all the problems with last year's icky version. I do hope they get their act together as we do hear from a lot of loyal Galactinoids who have done some fabulous things with this package and ill deserve to be stranded. But the "Rush to the Internet" is going to inevitably leave behind some casualties. A kind of adapt or die Darwinian process is in play I can neither slow nor impede with unctuous platitudes or happy talk. I can say that we were touting connecting your BBS in the Internet rather strongly by the occasion of our 1992 convention, and if they didn't get the earliest heads up in the industry that this was going to happen, they just weren't paying any attention.

I do hope you can get the tin lizzy fired up and make it to our convention this year in San Francisco. That's a swag from Alabama, and small growing businesses are very jealous of their proprietor's time. But this industry is changing rapidly and becoming very competitive, and I would urge you to come join us.

Jack Rickard

◆◆◆

From: Mark Stone[**SMTP:markst@kudonet.com**]
Sent: Monday, March 18, 1996 10:30 AM
To: jack.rickard@boardwatch.com
Subject: domain names

I want to applaud your fine magazine and comment on the domain name mess. I first picked up a copy of ***Boardwatch*** about a year and a half ago, thinking "Gee, I'm mostly interested in the Internet, but I wonder what BBS's are up to lately?" Since then I haven't missed an issue, and I think you have the best publication about the on-line world in general. Keep it up!

Now, about this domain name mess. I think the problem clearly stems from the fact that there is no correlation between domain names and IP address classes. Whether you are mom_and_pop.com, a one computer PPP connected presence, or megacorp.com, the gateway to thousands of machines, you get the same extension: .com.

Class A networks, and perhaps Class B networks, should have their own extensions. Wouldn't a .aol and .cis extension make more sense for America On-Line and Compuserve Information Service, rather than cramming everything into **aol.com** and **compuserve.com**? I also don't see why we couldn't have a .sun or .ibm extension; surely these guys are big enough.

At the very least a distinction could be made between Class B networks, Class C networks, and a single machine on a network. If Mr. Newton wants to register his domain name for personal use on his personal computer without getting into a lawsuit with Apple, why not have a .per extension available to him, to indicate this is a person, not a corporation, or have a .bus extension available to indicate that this is his small business, not a larger corporation?

Another way to think about the problem is that the whole idea of the .com extension was conceived when commercial presences on the Internet were very much in the

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ATM	#2
ROUTERS	#2
REMOTE ACCESS	#1

Source: Recently published reports from Dataquest, IDC, and/or Dell'Oro Group.

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minority. Surely we could broaden the number of extensions: .bus, .inc, .corp, ... the possibilities aren't limitless, but they are great enough to aleviate the problem.

-Mark Stone

P. S. Didn't see Mothra in the last issue; I hope this feature hasn't been dropped. I look forward to the further adventures of Mothra the way some people look forward to the next episode of their favorite TV show. Please don't cancel the series in the midst of a cliff-hanger ending!

Mark:

The domain name structure is a mess. I think the original premise of geographic identifiers was best but it failed. I would not advocate your solution. Mr. Newton was using his personal name, but he was using it for a commercial online service. If he wants to be .com, he should be .com. One of the interesting things about the Internet is that it is in some ways a great equalizer or leveler. Small companies are on a somewhat equal footing with large corporations.

The current situation simply begs the question and encourages the "big fish eat smaller fish" situation otherwise known as "my lawyer can beat up your lawyer any day." Using the dot three extension more creatively might alleviate the problem, but not by much. It's akin to the toll free 888 ploy to free up the shortage of 800 names. Immediately, the 800 owners filed for 888 as well and within the year it will be in the same state of shortage.

In the absence of a rational plan, and we seem to be without one, I would advocate a first come first served policy which was what was extant before the lawyers got involved. The second move should be to make the InterNic responsive to bona fide court orders, and nothing else beyond first come first served. But it is a mess and I take no small joy on arising each morning to learn that my name ISN'T David Graves.

Jack Rickard

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USR SPORTSER 288 VI DVSD MODEM & AOL:

Dear editor:

If you are not the right person to address this problem to, I would be grateful if you could pass it on to whomever on your editorial staff would handle it.

I have a USR Robotics Sportster 288 Vi DSVD internal modem. My computer is a 486DX2, 66mhz, 16 meg RAM, Win3.11, Dos6.22.

The problem: In AOL with baud rate set at 288 or higher, when downloading files - either a) what is listed, say, a 1-2 minute download takes 9-12 minutes as though it were at 2400 baud; or more recently b) during the file download AOL disconnects. I have asked USR and they just don't answer. I have asked AOL and they have sent different modem strings which have made no difference, until the last message which said, and I quote:"Please contact US Robotics and notify them of the difficulties that your are having as they will be able to help you. They are currently aware that there is a problem, and will do what they can to help you."

The point is US Robotics just don't respond. I was therefore wondering if through Boardwatch Magazine you could find out directly from USR what exactly the problem is with this USR Sportster Modem and AOL, and how to fix it.

You will see from the USR BBS as well as the AOL USR Message area that I am one of many who have had this problem, have complained and get no answer from USR. This very slow download/disconnect problem does not happen with other online programs/services such as Netcom (this e-mail), Quicken Online Banking, Citibank Online, other BBS's etc. which I use regularly without a problem.

Thanks in advance for your help on this matter.

Matthew Ody.
kant@ix.netcom.com

Matthew:

You're in over my head buddy. This is the very first time we've ever heard of compatibility problems between two vendors where each points the finger at the other. Now let's see. You have a modem that works with all major online services except AOL...and it doesn't work with AOL. Hmmm....

Jack Rickard

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SOME COMMENTS ON BANDWIDTH TO HOME

Hi Jack,

I just finished reading March ***Boardwatch*** from the website. I greatly like your opinionated editorials and the letters to the editor part (the best part). Thank you for posting the articles online and letting us read them for free.

Many significant things happened since the March articles went to press. I expect to see some of them covered in the future issues.

Regarding bandwidth: I agree that local telcos are the bottleneck for consumer access to the internet (As long as they own the monopoly over the local access loop.) This monopoly is not so natural as many think. Cable companies being so ill-reputed, I hope to see alternative to them. My idea (not original) is that FIXED WIRELESS can be used as an alternative local loop. AT&T/MCI can easily provide that ubiquitously in two years if they want. But (besides regulatory hurdles regarding spectrum) they are not sure that they will make attractive profit. But I think they will if they commit to it. Fixed wireless is not the usual cellular thing. Mobility won't be allowed. It is just that local link to the consumer will be via radio. Providing such link is far cheaper than cellular. Robust 64Kbps connection via fixed wireless is viable and such substitute for wireline network is being deployed in the rural areas of some third world countries (because it is far cheaper).

Once an alternative to the copper local loop from RBOCs is found, ISDN will get cheaper. Without such competition, ISDN will have to have a regulator-controlled rate structure and its popularity will be far away.

I prefer ISDN to cable modem (such as @Home type venture) because cable modem access is highly asymmetric and with lot of sharing the access speed at the peak time may be slow.

Majority of the online/internet consumers are acessing the Net at 14.4 Kbps. Contrast that with a recent news report :Fujitsu has successfully demonstrated 1.2 TERA BITS per SECOND over a single strand of 90 mile long fiber without using amplication or repeaters. At the same time AT&T too demonstrated similar feat independently although Fujitsu's feat is more spectacular.

MIT's Negroponte suggested a government-financed deployment of fiber-to-the-home network for US. Italy is doing it. Negroponte estimates the cost to be $400 per home. (Contrast: A top of the line 28.8 modem costs about the same.)

Regards,

Subhas Roy
subhas@cs.wm.edu
PhD student, Computer Science
College of William & Mary, Virginia
subhas@cs.wm.edu

Roy:

You got some of the facts partly right in places. But your point is appropriate and doesn't suffer from the reality gap too badly. I agree that wireless access over the last mile has legs. The opening of the FCC rulemaking on NII Band adds a great deal of credibility.

Jack Rickard

◆◆◆

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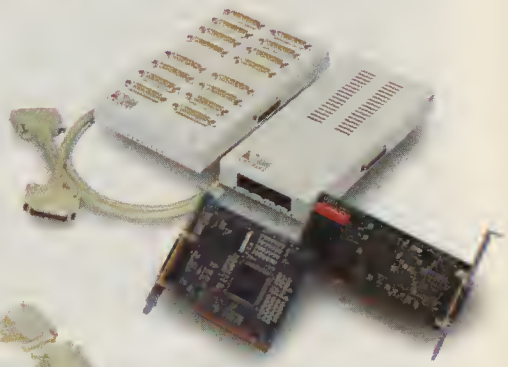

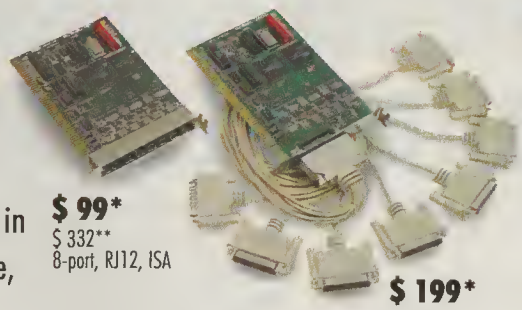

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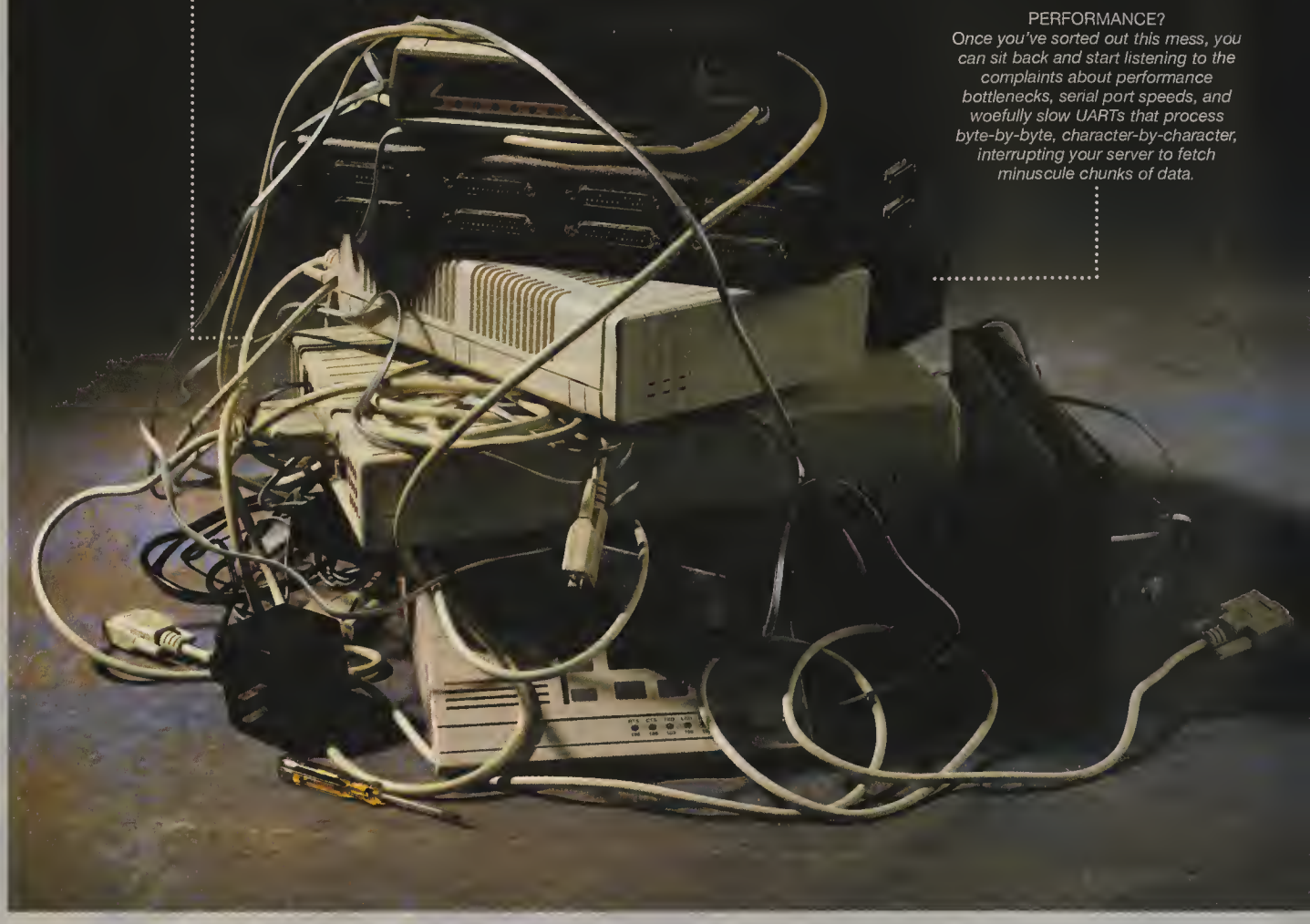
RELIABLE?
What can we say? There are a lot of cables. There are a lot of power supplies. There are a lot of potential points of failure. A typical serial port adapter with four external modems has a MTBF of 9,833 hours. A typical serial port adapter with eight external modems has a MTBF of 5,408 hours. That's about a 1/4 of the MTBF of Xircom's Netaccess MultiPort Modem Card.

MANAGEABLE?
Flicker, flicker, flash flash. What do they say? What do they mean? Trying to manage remote access communications by watching modem lights flicker on and off is more frustrating than informative. And at best, you only know what's happening on one side of the fence.

SCALABLE?
Add another card, add another modem, rearrange the spaghetti, push the whole mess back into the closet, hope nothing comes loose or gets unplugged.

PERFORMANCE?
Once you've sorted out this mess, you can sit back and start listening to the complaints about performance bottlenecks, serial port speeds, and woefully slow UARTs that process byte-by-byte, character-by-character, interrupting your server to fetch minuscule chunks of data.



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Now it's really easy for you to extend your network operating system along with all of your applications, from e-mail to database services, to all of your remote users without stocking and maintaining a closet full of modems, cables and power supplies.

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And you have more than four times the

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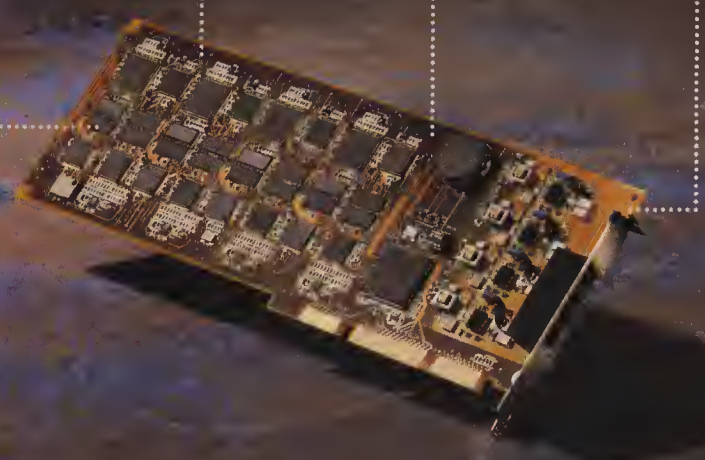
RELIABLE:
With the RJ-11 connectors attached directly to the Netaccess MultiPort Modem Card, the vast majority of cables and power supplies of external modems are eliminated. MTBF for a Netaccess MultiPort Modem Card with four V.34 modems is 41,791 hours. Calculated MTBF for a Netaccess MultiPort Modem Card with eight modems onboard is 23,076 hours.

PERFORMANCE:
No waiting for UARTs, no serial port bottlenecks, just big blocks of data moving swiftly and smoothly between your Netaccess MultiPort Modem Card and your server.

MANAGEABLE:
The Xircom Netaccess MultiPort Modem Card lets you monitor the status of your local modem connections, including speed, type of compression in use, type of error detection in use and more on your SNMP workstation.

SCALABLE:
Add another four or eight ports by adding another Netaccess MultiPort Modem Card to a maximum of 64 ports per server depending upon host system resources. No mess, no fuss, very little spaghetti.



REMOTE ACCESS UNDER CONTROL.

reliability of other remote access solutions and none of the nasty maintenance hassles that come along with serial port boards.

As your needs grow, you can simply add multiple boards to accommodate up to 64 ports for every server you want to mount.

Xircom Netaccess MultiPort Modem Cards are the easy-to-install and very easy-to-monitor remote access solution that is scalable, reliable and totally compatible with the network operating system you're running today. So don't let remote access get out of control in a closet full of modems, cords and twisted spaghetti.

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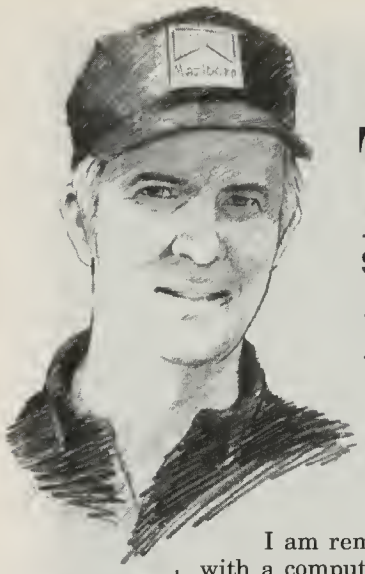

TECHNOLOGY FRONT

by Jim Thompson
Western News Service

SINGING THE INTERNET BLUES: A VOICE OF DISSENT

Everywhere I turn, there is new hype about "The Internet." According to the commercials, The Internet is an unlimited system that can provide you with everything about anything you would ever want to know.

I am reminded of one of my first experiences with a computer. It was about 1979 and the newsroom where I was working had just received its first computer. It was a brand new IBM 8088 PC, running at 3-Mhz. After looking at it for a while, someone finally got up the nerve to actually ask, "Just what is a computer, anyway?"

We tried, but couldn't really come up with a reasonable answer. Finally, the receptionist, chimed in. "Oh, that's easy," she said. "It's a little box that has all the information in the entire world inside. All you need to know is what keys to press to get the information out."

Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: **72777,2677**, MCI Mail: **321-4127**, **mailto: jim.thompson @wnsnews.com**

INTERNET HYPE & LIES

That may sound a bit silly, but this is exactly what the Internet hawkers are trying to push on an unsuspecting public. The whole Internet and WWW hype is one of the biggest shams ever perpetrated. In many cases, people are outright lying about what it is and what it can do. Ironically, Corporate America has been the most gullible in this whole scam.

I have talked to many people in the corporate world who have set up or are setting up Web sites. The conversations are all about the same. "We're putting up a Web site, so we will have an audience of 40 million people! Boy are we gonna make money!"

Wrong!

Those who already have a Web site say, "Wow, we're getting 1,000 hits a day!"

I can't believe that intelligent people are actually buying all this crap. Unfortunately, it is my own colleagues, the computer professionals, who have created and are perpetuating this fantasy.

To start, where did the 40 million people number come from? There may be 40 million people who possibly have access to the Internet, but I bet the majority of them don't even know they have that access. One example is anyone who owns Windows 95. Technically, they have Internet access, but few probably use it. Another example are the commercial services like America Online and CompuServe. Again, anyone with an account also can connect to the Internet, but if they are like me, they have never done so because it is both a lot of extra trouble and a lot more expensive than going directly to an Internet provider.

It's hard to believe that anyone is naive enough to think that 40 million people will actually call their Web site. First, I doubt if any server could even handle such a load. Second, unless you are giving away free Mercedes-Benz sport coupes or offering a night of free sex with the person of your choice, I doubt if that many people would even be interested in anything you may have to offer.

You should see the blood drain from the faces of corporate executives when I explain what is actually meant by a "hit." Most are under the assumption that a "hit" represents a person who calls the site. Therefore, 1,000 hits means 1,000 callers. Not true, net breath. They suddenly get very quiet when it is explained that a "hit" means access to a page on the Web site and that 1,000 hits probably means no more than 200 actual callers and could be more like 100 callers.

Recently, I was talking with a representative of a major corporation. After proudly declaring that they have been operating a Web site for nearly a year, I asked what benefit they are getting from it. "We get 'thousands of hits' a day from all around the world, etc., etc., etc." After a few minutes of this dogma, I finally asked for specifics.

They do have a marketing area on their Web site where they sell their products: hats, shirts, etc. How many did they sell in the last year? (I figured this would give me a real handle on how effective their foray into the Internet has been.)

Even I was taken aback when told that over the past year, they had sold only 30 items! In a full year of paying for a Web site from some "crook" who is promising an audience of over 40 million people, all they sold was a lousy 30 items. Gee, how can I get such a good deal!?

PAINFUL SETUP

Even at its best the Internet is a big pain-in-the-butt. Now, I pride myself on knowing a lot about computers and communications, but about all I ever got out of using the Internet is frustration.

First, it is a royal pain to just set up the software and get an Internet connection working. Even as a so-called "power user" this is hard. I can hardly imagine what the first time user is going through.

Techno-geek: "Yea, getting on the Net is easy, dude. All you need is a browser..."

Newbie: "Wait, what's a 'browser?'"

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Techno-geek: "Well, it's like a communications program. It's what you need to talk to your 'winsock.'"

Newbie: "Hey, wait. What's a winsock??"

Techno-geek: "That's a windows socket, a Dynamic Link Library (DLL) program that provides the interface to TCP/IP services. It's what you need to set up a SLIP or PPP connection to your Internet provider. This gets you on the Net."

Newbie: "Wait, you mean I need a browser that talks to a socket which provides the interface to TCP/IP services (whatever the hell that is) that talks to a provider who connects me to the Net?"

Techno-geek: "Yea, now you're getting it. See how simple it is?"

I have run a BBS for more than 12 years and I can tell you that just getting people to understand the use of a simple comm program and modem is sometimes nearly impossible. Right now I distribute a single diskette with a comm program on it (RIPterm 2.2) to our users.

This diskette has only two files on it, a self-extracting archive and a file named **INSTALL.BAT**. The diskette comes in a package with instructions on it. Inside is a help sheet which also contains instructions. The diskette itself has installation instructions (put in Drive A: and type: INSTALL). Even with something as simple as this, I have people calling me all the time saying they can't install it! If most people can't type A:INSTALL, how are they ever going to understand the installation process for Trumpet Winsock and Netscape?

MAKING THINGS WORSE

Once you do get on the Net and/or the Web, things don't get any easier. Finding what you want is nearly impossible and there is still more jargon to learn. Now that you are on, you get to learn about all kinds of stuff like "yahoo," "Archie," "Veronica," and whatever else the geeks of the world can come up with that they think is "cool" and confusing to those who are not "on the inside."

Besides being confusing, the Web is probably the biggest time waster in the entire world. Hey, I don't care what anyone says, the Web is *sl*-o-o-o-o-o-o-*w*. For years, the BBS community has worked to make things operate fast over a phone line. The software developers optimized their code to make it as efficient as possible. The sysops tweaked their hardware and software to get the maximum performance from their systems. Then, just when things were operating at maximum performance, along comes the fascination with the Internet.

Techno-geek #1: "I'm bored with all this BBS stuff. I have a system that has been running for two years and it has never failed. What's the fun in that? I long for the constant change and the challenge of a system that crashes every other day. I miss the bitching by callers that the system is down — again. The thrill is gone."

Techno-geek #2: "I have an idea, let's junk all the software that allows us to run 16, 32, 64 or 96 lines on a single machine and replace them with real expensive servers that will allow for a minimum number of lines. Not only will this be far less efficient, it will also be far more expensive and much more likely to crash every day!"

Techno-geek #1: "Great idea! Then — if people are still not mad at us — let's get some software that is real slow and VERY big — hey, the more inefficient the better!"

Techno-geek #2: "Yea, forget about comm programs that fit on a single floppy disk. I bet we could get a system that takes up 9 or 10 Megabytes! It could even be clunky and almost impossible to setup and operate."

Techno-geek #1: "If we work it right we can make all those 14,400-bps modems about as efficient as the 2400-baud models. Man, this could be the slowest thing ever!"

Techno-geek #2: "To top it off, we could make it almost impossible to maintain security on the system. Best of all, we can have people *pay* us for all this suffering. All we need to do is convince people that they aren't cool if they are not on the system."

Even when things are working reasonably well the Web can destroy a day. Most people will spend several hours just looking around the Web. This might be great fun for the unemployed or for people without a life, but I don't know of anyone in business who has the time for it. Most try it once, realize what a time waster it is, and then decide to "look again over the weekend or when they have nothing better to do." It makes you wonder what kind of people actually make up that mysterious "40 million" on the Net.

JUNK MAIL

I am also not happy about all this damn Internet mail that I get every day. I don't even *use* my Internet e-mail address, but I still get some 200 messages every day. Part of this is because I am managing editor of a news service. Apparently, someone decided that the best way to "get to the media" is through their e-mail. So, every day I am flooded with junk mail over the Internet. I never asked for this stuff and, for the most part, I don't want it. The truth is that I read only a fraction of all the mail I receive. I also tell people that I go for days and sometimes even weeks without looking at my e-mail.

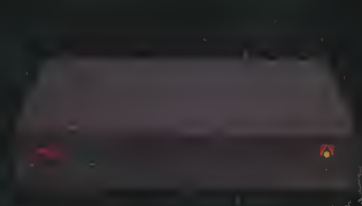
It's simple. I can read and respond to all the junk I receive and never do any work, or I can do my job and make enough to pay my bills. Tough choice.

GYPSIES, TRAMPS AND THIEVES

Maybe I haven't talked to the right people, but so far I have not found anyone who is really making money from a Web site. This is not to say that tens of thousands of people are not making money because of the Web and the Internet. Many are hired at big salaries by big corporations to set up and run Web sites, others are making a killing as service providers. There are also millions being made selling hardware and software. But, aside from those running porno sites (sex sells no matter what the medium and how difficult it is to access) I have not met any individual who has set up a Web site who is making much (if any) profit. This could be because most of the people running Web sites have no idea how to do it. They may be technological wizards and have a site that runs better than any other in the world. The problem is that most haven't the slightest clue how to make a site interesting for the user.

The techno-geeks of the world should set up the sites, then step aside and let those with content programming experience take over. I can tell you from experience that if your Web site or BBS is not updated every day, people will stop calling. I don't think most people involved in running Web sites understand this principle. The only one who looks at yesterday's newspaper is the caged bird. The same principle applies to a stale Web site.

Like it or not, when you run a Web site you are no longer in the computer business — you are in the *publishing* business. As far as I am concerned, it takes



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There are just two ways to provide Internet Access. The wrong way and the MAX way.

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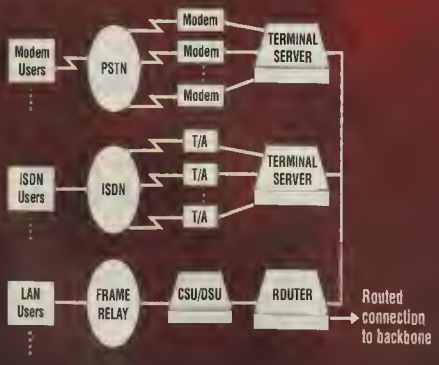
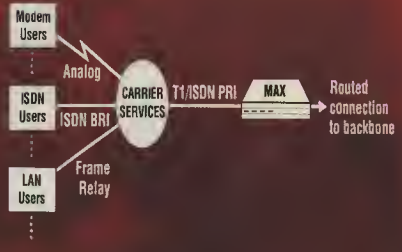
(Without the MAX)



THE MAX WAY



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someone with a strong background in journalism or publishing to make a Web site interesting and worthwhile.

The Web is desperately trying to do the very things that the BBS world has done for years. I say let the BBS systems do what they do best and not try to force a system that is not presently equipped to handle the job attempt it. The best solution is a telnet client to a BBS which allows you to browse the Web and then jump to a BBS system for other functions.

Something else that some Web site operators don't seem to understand is that when you take something from someone else and post it on your site, it's called theft. For some bizarre reason, there are operators who apparently think if something is in a computer, it is all right to use it in any way they want without permission.

Techno-geek #1: "Putting new material on our Web site all the time is a real drag. This is like work, dude."

Techno-geek #2: "Yea, it really sucks. Hey, I just saw some neat stuff on another site. Why not just take that and post it on our site."

Techno-geek #1: "Great idea. With all the Web sites around the world we could have an unlimited source of material without paying a dime! Gawd, I love technology!"

Suppose you wanted to start a magazine. You have two choices. You can hire reporters, editors, proof readers and other personnel, pay them reasonable salaries to produce material, then rent or lease offices and fill them with all the equipment you need to produce the final product. The result may be that you make money or you go broke — that's the chance you take.

The second choice is that you can save a ton of money by picking up copies of other magazines from the local newsstand (or save even more by "borrowing" them from friends or the local doctor's office). Then all you have to do is tear out the pages with the articles and photos you like and paste them into your magazine. You wind up with a publication that has the best articles and photos you can find and it cost you almost nothing to produce.

Of course, if you did this with magazines, you can bet that you would find your little behind in court quicker than you could say "HTML." Where I come from it's called theft, plagiarism, larceny and copyright violation. The whole Internet "thing" is still new, but the day will come when these violations will be enforced. My advise is to stop stealing and start doing your own work.

Now, before I get flamed for having the nerve to actually make disparaging comments about the sacred Internet, let me make a few things clear:

First, I am not saying that the Internet does not have value. I use the Internet and often find it a valuable resource. There are some wonderful things on the Internet and the Web, but there is also a lot of junk.

I am also not saying that every Web site operator or Internet provider is crooked or incompetent. On the contrary, the majority of the operators are honest, hard-working people who know what they are doing. But, there are enough people around who are either incompetent or outright crooked that the whole business is beginning to get a bad reputation. As an online service provider, I am concerned and I think every other honest provider should have the same concerns.

I am also not saying that there is no hope for the Internet, there are redeeming values and things are beginning to get better. Things are changing and one day the Internet may actually deliver on all the promises. But for now, as far as I am concerned, it's a big waste of time, energy and money. Of course, it is possible that I just don't "get it."◆

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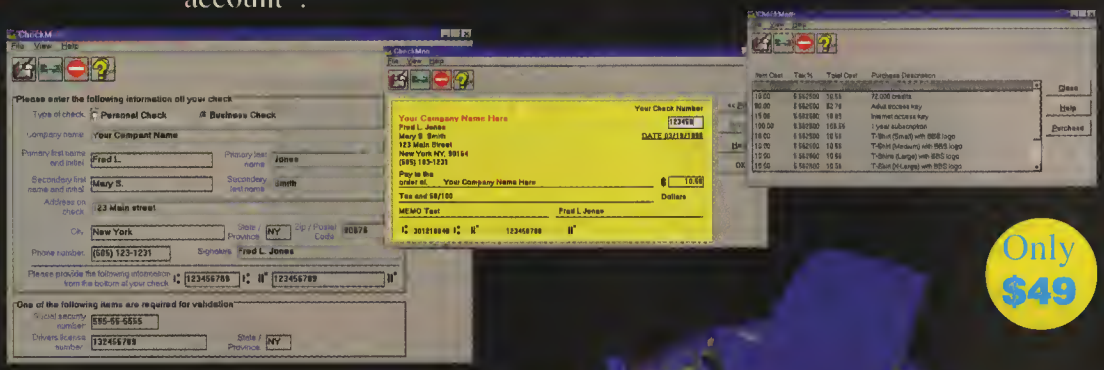

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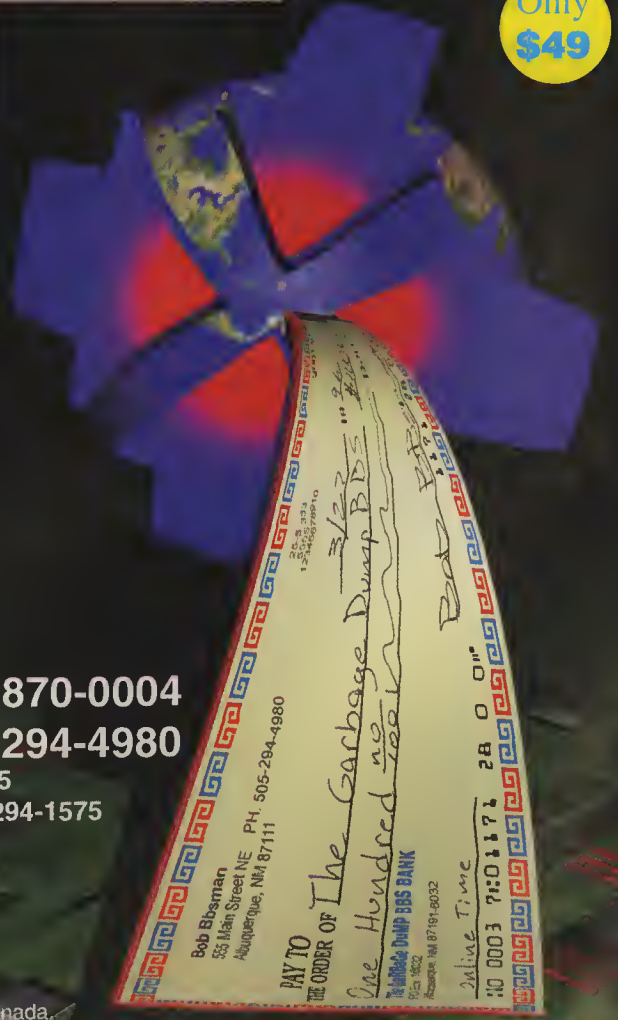

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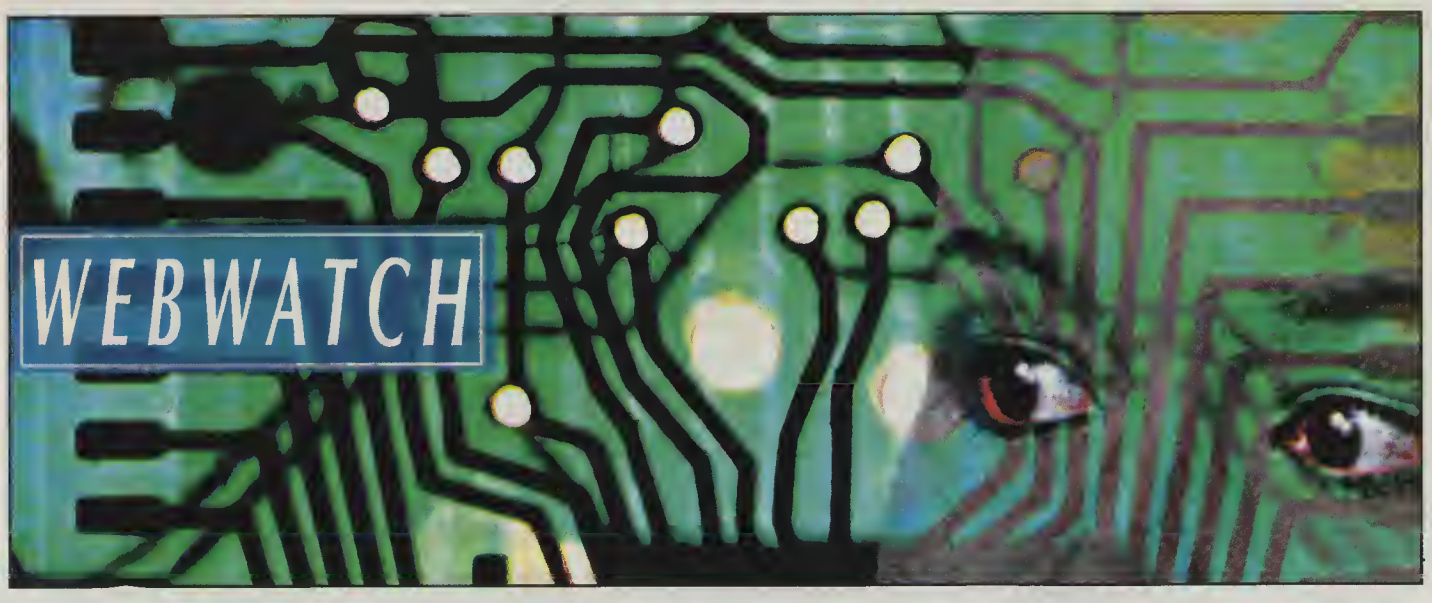
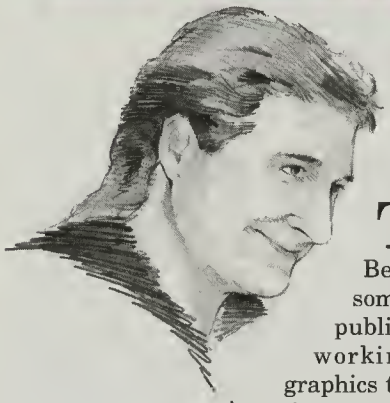




BABB'S BOOKMARKS by Chris Babb

ROLLING YOUR OWN NEWSPAPER

This month I'm going to get a little personal. Personal news that is. Being in the computer industry, I have somehow become a subscriber to countless publications that run the gamut from networking to desktop publishing and from graphics to general "kitchen sink" industry news. Without question, these are great sources of information and many of my hours have been filled with the sound of flipping pages as I search for useful information. I am constantly fighting against time, sifting through information that doesn't interest me, advertisements that threaten to overtake the amount of actual writings and the nemesis of the dreaded "bingo" cards that litter both the publications and my floor.

Of course, there are ways around all of this. I could simply cease reading all of this information. I could also refuse to answer questionnaires and quit sending back the free subscription request forms. Finally, I could do both of the above and instead jump online to do all of my reading. (Then again, considering that much of my reading occurs while on the throne of meditation, I guess I'd have to install a network port next to the paper roll!)

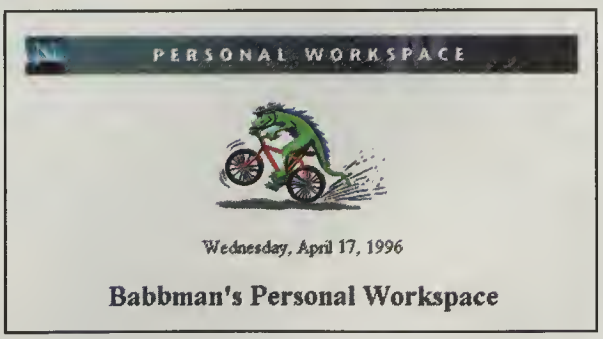
All kidding aside, many of our favorite publications are currently available online, minus many of the misplaced advertisements that make reading more of a chore than it should be and minus those pesky "bingo cards." Some of them also filter out information and news that you don't want. Sound interesting? It is. Imagine a publication that caters to your personal tastes and interests. A publication that only contains those topics that are critical to you and your work. Finally, a publication that doesn't clutter your desk, floor or inbox with mountains of dead trees.

Chris Babb is a Senior Systems Engineer for Control Masters, Inc., a Systems Integrator located in Downers Grove, IL, where he designs industrial automation software by day. He's a member of the Aquila BBS/Internet Team by night. Chris has worked with Aquila since 1990 and currently handles technical support, Web design and construction, Internet training and various other online and offline duties. In his meager spare time, Chris enjoys music, playing bass guitar, the outdoors and his kitties. You can reach Chris via mailto:chris.babb@aquila.com

Most of the sites I'm covering this month are free services. One is not. Even though I'm a strong believer in sites that are sponsored by someone else's dollars, I thought I should include this one as it is quite popular and provides excellent information.

Let's take a look at just a few of these services available on the Web today.

NETSCAPE PERSONAL WORKSPACE
http://home.netscape.com/custom/



While not a personalized news service in the strictest sense, I thought I should include this new service because it's new, it's free and it's a great idea that has a lot of promise.

The Personal Workspace gives you the ability to gather all of your most important links, news services, reference materials, the latest news from Netscape (go figure) and much more onto a single web page. The Personal Workspace is Netscape Browser specific and is created for you, based on your personal setup made via a JavaScript applet.

All of your preferences for this page are stored on your machine, which eliminates having to type a username and password every time you access this page.

Setup, while slow (I find everything Java to be slow), is relatively easy and is accomplished by simply clicking and typing from the provided options on the Personal Workspace Wizard Web Page. This page is divided into frames that provide the setup options and a sample of what your completed page will look like, including samples of graphics, lines and other choices. Some of the control that you have over your page includes layout in table or non-table form, horizontal lines, 10 different canned graphics, color combinations and backgrounds, a notepad and of course, the type of information you want displayed on your page.

The information choices include 10 news services ranging from CNN and USA Today to ESPN SportsZone and PC Week. Eleven reference publications will help you create your own web pages, learn more about our government and provide you with familiar quotations among other things. You can litter your page with several of the best search engines, cool site choices like Project Cool Sightings, and several Netscape pages. Finally, you can add your personal favorite sites until your fingers go numb.

Basically, this service is worth checking out and worth making your initial page when you run Netscape. The only drawbacks that I can find are the slowness of Javascript and the fact that you are not allowed to choose graphics other than the canned images provided. Other than these minor items, there isn't an easier way to collect all your favorite links in a single spot.

CRAYON - CREATE YOUR OWN NEWSPAPER
http://crayon.net

CReAte Your Own Newspaper. The name says it all. This site is along the same lines as the Netscape Personal Workspace in that you don't have the ability to select specific news items. But the amount and variety of news information that can be linked into your own personal newspaper makes it worth more than just a casual glance.

Fourteen categories of news services are available with over 240 selections in all. As far as creating your own newspaper goes, click on the link, name your paper, come up with a catchy motto and select your news. Be selective; with the number of choices available, you could end up with a whopper of a paper if you're not frugal in your selections. You may want to review the numbers in brackets next to the selections. These numbers tell you what is popular and what is not among the 200K or so people who have created their own newspapers with CRAYON.

After making your selections, you will be presented with a page that will allow you to dictate the order in which the selections will appear on your page. From there, it's a matter of instructing CRAYON to generate your newspaper template. Once the template has been created, you'll need to save it to your hard drive following the instructions outlined on this site for the different browsers. The template provides you with a personal HTML document that points to the news you want. Anytime you want to read the news, simply load up this page and read away. There is no need to access the CRAYON web site unless you need to make changes to your selections.

Other interesting information available from this site includes links to personal newspapers that other people have created, FAQ's on CRAYON's service, the ability to suggest links to be added to the service, the CRAYON cool site of the day and much more.

As a personalized news service, this site may fall down in terms of being able to drill in on a specific subject, but where this site shines is in its well organized, massive list of news from around the world. Even if you don't want to use the personal newspaper service, at least bookmark the news listing page (**http://crayon.net/using/links.html**) for access to virtually every news source on the web.

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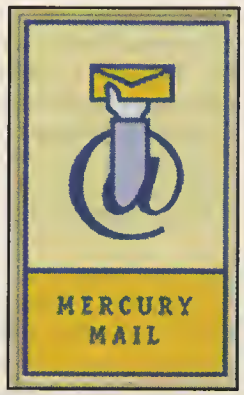
http://www.merc.com



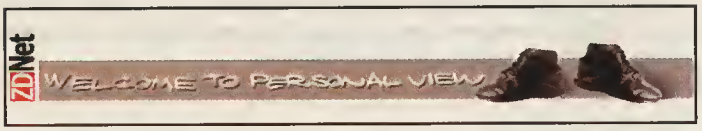
Mercury Mail delivers on their promise of supplying us with a wide range of information directly to our desktop through e-mail. While not as pretty as reading on the web, e-mail is still used more than any other service and is a natural for the quick and easy delivery of information. Also, not everyone has a top of the line, multimedia ready Pentium computer with all of the latest web goodies and the time to get this same information from the web. There are many of us who want timely information on the topics that interest us delivered to our e-mail box so that we can inform ourselves as workloads permit.

Mercury Mail offers a wide range of information services both free and for a fee. Let's look at the free ones first. The Weather Vain features weather reports for up to 3 cities based on Zip Codes. Setup is as easy as entering the Zip Codes and selecting the font style and units for temperatures and pressures. Delivery can be made up to 2 times during the day and any or all days of the week. This service is a joint development of Mercury Mail, The Weather Channel (**http://www.weather.com**) and Web Weather **http://www.princeton.edu/Webweather/ww.html**). It gives a clear, concise forecast for the next five days.

Another free service is the ConsoliDate reminder service. After forgetting my girlfriend's birthday for the second time, I reminded myself that if I did it again, the poop would hit the fan. Needless to say, I quickly signed up for a friendly reminder. You can save up to five reminders with the person's name, age, event date and some notes that will remind you of why you wanted this reminder. You will be notified a week before the date specified and the day before. A great service for people like me who can remember their Social Security number, driver's license number and the name of every teacher since kindergarten but can't remember one stupid date out of the year.

Fee-based services include the Sports Wrap where you can pick the sports, the type of coverage, and the teams on which you want information. The Closing Bell delivers the closing prices for up to 30 different stocks within a few hours of the closing of the markets. NEWSpot will supply you with the current headlines from 13 different categories that include politics, business, sporting news and entertainment. Quotes & Anecdotes allow you to have many of the most popular calendars available in stores delivered everyday to yourself or a friend. You can choose from among 14 different calendars like Dead Celebs, Politically Incorrect, Spiritual Truths and Legal Lunacies just to name a few. All of the above services are fee based but with the exception of Quotes & Anecdotes, you can try them out for free for a specific amount of time.

ZDNET PERSONAL VIEW
http://www.zdnet.com/zdi/pview/pview.cgi



In terms of useful computer industry news, no one does it better. Ziff-Davis publishes some of the most visible computer magazines on the market, including ***PC Magazine***, ***PCWeek***, ***Computer Shopper***, ***MacUser***, and many other titles . With some of the best writing in the industry and the most up-to-date information available, their Personal View news service can't be anything but a winner.

Personal View is a free service to anyone who feels inclined to register. Registration involves filling out the customary form where you tell them everything about yourself, your interests, your computer, the magazines you currently read and even your mother's maiden name along with the username and password you wish to use for getting your news. After submitting your registration you are taken to the personal profile page where you specify just what computer industry news you want.

This is where the service really shines. There are several broad categories of news to choose from. *Systems* offers the standard choices from PCs to Supercomputers. *System Components/Peripherals* lets you in on the latest news concerning CPUs, CD-ROMs, Storage Solutions, modems and several others. *Software* consists of operating systems, consumer software, VRML, software development, multimedia and more. *Connectivity* news covers the bases from the Internet to WANs to Videoconferencing. *Business* takes you behind the scenes with company news, mergers and acquisitions, financial reports and several others. Finally (as if these weren't enough) you even have the ability to enter five different keywords that allow you to specify something not included in the expansive list mentioned above.

Retrieving your Personal View is as easy as jumping to the Personal View login screen, entering your username and password and reading your personal news selections. Also available from the login screen is the ability to look-up a forgotten password (remember your mother's maiden name?) and the option to change your password and username at any time.

Overall, if you're into computers and want to keep abreast of the latest happenings in the computer industry, this is your site.

PCN - THE POINTCAST NETWORK
http://www.pointcast.com

Pointcast is an amazing source of information and news that is delivered directly to your PC through a specialized interface rather than through a web page or through e-mail. The Pointcast Network interface is well designed, very intuitive and a pleasure to use. I was quite skeptical at first because the last thing I need is another piece of software cluttering up my hard drive but after installing it, personalizing it with my unique tastes in information and pressing the Update button, I was presented with all of the information I had specified within a few minutes.

Pointcast was founded in 1992 to bring news and information to users via online services such as CompuServe and America Online. The current iteration of the network supplies six types of information: News, Companies, Industries, Weather, Sports and Lifestyle. These combine to offer unprecedented access to all the important news of the day, up-to-the-minute stock quotes, weather reports from around the country complete with maps, sports and much more.

Installation of the software and personalizing the delivery of news and information to your desktop is extremely easy. Press the *Personalize* button and you are presented with a panel of choices. Stocks are selected by typing the company's symbol. There is a handy lookup feature that allows you to enter the company's name and you are given the symbol. Up to 25 companies can be tracked this way. Weather reports are selected from a list of 150 U. S. cities. Sports enthusiasts can choose from 9 categories that cover all the major sports and general sporting news. *Industry* consists of almost 40 categories that range from computer hardware and software news to restaurants to the economy and everything in-between. *Lifestyle* allows you to specify your astrological sign and even will supply the lottery numbers for your state.

Once you have made your selections, you'll want to set your options. Click on the Options button and you have full control over the screen saver options, a full featured scheduling program that allows for automatic updates to your personal news, a place to enter your name, e-mail address and SMTP server and the ability to set up a HTTP proxy.

Once you've got everything set to your liking, all that's left is to get your news. You can click on the Update button or let your scheduler take over and within a couple of minutes, all of the news that's important to you is waiting for you.

Topic selection buttons are on the left, news topics on top and the body of the currently selected article fills the rest of the interface with a scrolling stock ticker at the bottom. Choosing the news you want to read is as easy as clicking a topic and then selecting from the list of articles. Your selected stocks are shown with two graphs showing price and volume history and complete information on how this stock performed during the day. Weather is presented in a scrolling box with the different maps shown below. This is the weak point in the interface as I see it. While the weather is scrolling (even if you only have a single location selected), the mouse becomes unresponsive and the entire interface seems to slow to a crawl.

POWERBBS 96

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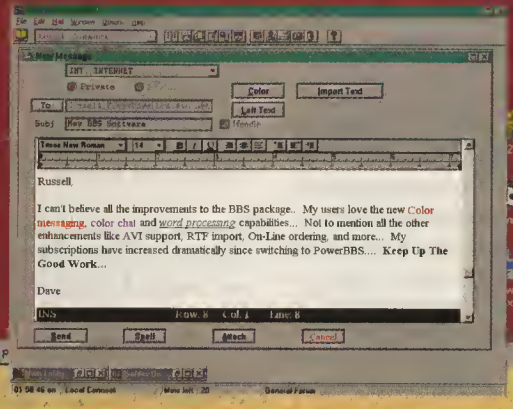
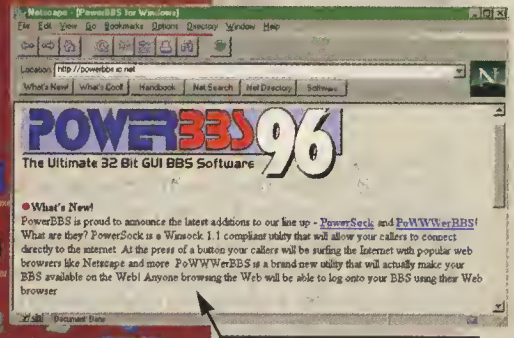


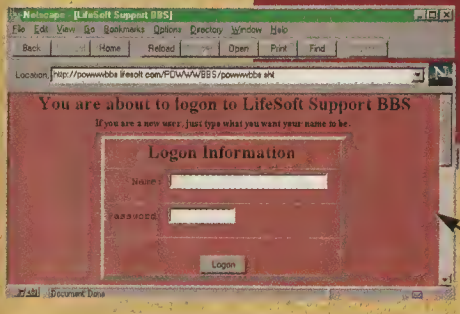
Full Internet Connectivity!

Complete access to the World Wide Web!



Give your callers full access to the Internet with PowerSock! Allow your callers to use any Winsock 1.1 compliant application through your single IP Internet connection. No need to issue IP addresses!

Your BBS On The Web



Allow World Wide Web users to log onto your BBS through the Web. The new PoWWWerBBS module is available ***FREE*** to all registered PowerBBS sysops with an Internet connection!

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Features	Wildcat5	Worldgroup	Mindwire	Mediahost	Excalibur	PowerBBS
Price for 4 Node Package	$349	$595	$495	$425	$199	$189
Years Windows Product Available	BETA	DOS	1	1	BETA	5
Graphical Formats Supported	3	23	7	7	3	26
GUI/ASCII/ANSI Connects	✓	✓				✓
Create 24-bit 5k-10k Resizable Previews				✓		✓
Play WAV & MIDI Files		✓		✓		✓
Free Off-Line Mail Reader		✓				✓
GUI (RTF) Message Editor		✓	✓		✓	✓
On-Line Databases		✓	✓	✓		✓
Runs DOS Doors	✓	✓				✓
Direct Internet/Network Access	✓	✓	✓	✓	✓	✓
Internet Mail/Newsgroups	✓	✓				✓
Telnet/FTP Access	✓	✓				✓
MAPI Client	✓					✓
Multi-Room Teleconference	✓	✓	✓	✓	✓	✓
Full-Video AVI Support				✓		✓

Data compiled from reputable sources, November, 1995.

PowerAccess - royalty free client software, complete with address book, multi-BBS operation, signatures, taglines, filing cabinet and Internet mail. Serves as a complete communications package, supporting ANSI, Zmodem and simultaneous bi-directional transfers. PowerAccess allows connection over any TCP/IP network, including the Internet!

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PowerBBS Computing: 35 Fox Court, Hicksville, NY 11801 - Tel: 516-938-0506

Other features available are the "SmartScreen" screen saver which shows your personal news when your computer is not in use, a built-in bare-bones web browser and the ability to print any of your selected news.

All in all, this is an excellent program with an excellent interface and is extremely usable. Best of all, it's completely free!

IBM INFOSAGE
http://www.infosage.ibm.com

IBM infoSage is a fee based service that caters to the business professional who needs to stay informed. Fees range from **$19.95** for charter members to **$24.95** per month for anyone who did not sign up during the beta testing period. With InfoSage, you have the ability to select only news that is important to you. This service differs from the other services mentioned in the way you set up your user profile and the ability to only get what's important to you.

To set up your profile, you first must fill out a registration form that asks the usual questions and how you want to receive your news. You can retrieve your news from the Web or have it sent directly to you via e-mail. You also need to have your credit card handy as you cannot complete the registration form without it. If you're uncomfortable with sending your credit card information over the Internet, you are also provided with a phone number that allows you to call it in. Once the registration is complete, you are allowed to download the profile editor. I groaned at the thought of installing another program on my already bloated hard drive but I downloaded it anyway (2Mb). Once I installed and ran the program though, I understood the necessity and beauty of it.

Running the program brings up the profile editor. This allows you to pick and choose from among four different topics; business, leisure, stocks and special editions. The topics are further subdivided in the Microsoft explorer fashion of folders within folders. Business topics consist of Manufacturing and Industry, Transportation, Technology and others. Each topic is further subdivided with subtopics within subtopics. You can easily spend several hours drilling down to find exactly what you want. Fortunately this is made easier with the search functions built into the profile editor. Stocks are selected by entering in the ticker symbol for the stock but you'll need to know them as there is no lookup feature built into the program. Special Editions will provide you with a list of specialized columns, summaries and updates that will require additional fees.

When choosing the news items of interest to you, another window will appear that allows you to enter key words and phrases and will also allow you to select the exact type of information you want included with your news. From there, you just add the topic to your list. Once you have selected everything you want, the next step is to prioritize your selections. You can also set an alert on the most important topic profiles, which will cause any article on that subject to be immediately sent to you via e-mail. The last step is to submit your personal profile. A simple click of the button and you will soon be one of the more informed people on the Internet today.

Without question, this is one of the most detailed and most configurable of the personalized news services on the Internet today. If you need information and you don't have the time to sift through information that is of no use to you, this service will be worth every penny.

THE PBS ONLINE EDITION OF "LIFE ON THE INTERNET"
http://www2.pbs.org/internet/

Life On The Internet is a new series being shown on PBS television affiliates that examines the ways that real people use the Internet and how it impacts the lives of all of us. This site is the online edition of the TV series and provides links to all of the information presented. Each half-hour show focuses on a different aspect of the Internet and includes such topics as education, medical uses, internetworking, e-zine publishing, privacy issues, e-mail and e-cash to just name a few. Each show has an associated page on this site that allows you to visit the sites described on the show and is accompanied by transcripts and video clips.

One of the most interesting (and time consuming) features of this site is the Net History link. If there was ever anything you wanted to know about the history of the Internet, you'll find it here. The presentation is done with a JAVA applet and is entertaining and easy to use. A time line is shown that starts with 1960 and ends with today. Clicking on the buttons at either end will take you forwards or backwards in time and will display the most important Internet events of that year. It is quite informative and will certainly help you understand just how far we have come in the last 30 years of online communications. There are also other links related to the history of the Internet and Usenet that should be required reading by anyone using the Internet today.

Other links on this site include a page of links that point to some of the more important and popular Internet software packages, a glossary of Internet jargon, an Internet trivia page, the standard guest book and a listing of where and when the shows are airing.

This is an excellent site with an excellent collection of information, designed to help you understand this complex animal called the Internet. Maybe it will help give you some ideas on how you can use and enjoy the Internet to its fullest extent.

NutSite© Of The Month

THE SPAM CAM
http://www.fright.com/cgi-bin/spamcam

SPAM is one of those mystery meats that I've never had the good fortune to taste. For some reason, it seems to invoke my gag reflex whenever the word is used and I have flashbacks to the time I was forced to spend in Dog Food Factories. I also have great respect for anyone who has the guts and ambition to actually ingest it. I shudder to think what would really

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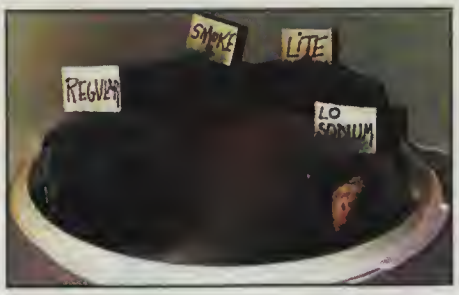
happen if I had to subsist on it and after seeing this page, I think I'd rather eat roadkill than subject myself to the horror of SPAM.



This page seeks to answer the question: Is SPAM Organic? The test? Let this insult to humanity sit out at room temperature and let the Internet community take an occasional peek at the progress of what is supposed to be the normal decomposition process. That's what this page is all about. The current experiment consists of SPAM, SPAM Light, Smokey SPAM and Low Fat SPAM, all left to rot within molding distance of each other. Quite a sight.

Besides the well orchestrated SPAM experiment, there also seems to be a penchant for anything that rots and the ability to suggest a rotting experiment is made quite prominent. Also available on this site are statistics on the current and past experiments, photo archives of these experiments and a collection of rotting food from everyday people called "Home Grown." Gotta see it to believe it!

I have these as well as all of my past articles available for your feverish browsing natures at:

http://www.aquila.com/babbs.bookmarks

Comments, good (preferred) or bad (only if you must) should be clicked off to:

mailto:chris.babb@aquila.com ◆

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CONSUMMATE WINSOCK APPS

by Forrest Stroud

Security is a concern on the minds of many would-be Net consumers. Similar to the technological advances made toward resolving the bandwidth issue, innovations like enhanced Secure Sockets Layer (SSL), Private Communications Technology (PCT), and Secure Transaction Technology (STT) protocols are doing their share to alleviate the concerns of the public. With so much to offer, it's hopeful that Net commerce will take off the way the Internet has, especially in the wake of improved security technologies. With the future in mind, here are my picks for the best commerce sites on the Net:

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, **http://cwsapps.texas.net** and **http://cws.wilmington.net.**

Forrest H. Stroud is a senior at The University of Texas at Austin. He is currently pursuing a degree and career in Information Systems and Data Communications Management. Stroud can be reached at **neuroses@mail.utexas.edu**

Internet Shopping Network
http://www.Internet.net

Perhaps the largest shopping site on the Net — ISN offers tons of commercial software, hardware, and related computer equipment.

Video Online Express (VOX)
http://www.videoexpress.com

VOX offers more than 50,000 VHS tapes, 10,200 Laser Discs, 3,500 Audio Books, and 100 Games. Slow service but excellent selection summarizes the VOX web site.

NetRabbit
http://www.netrabbit.com

Your source for the best software on the Net (I may be a bit biased here). Commercial and shareware Windows 3.x, Windows 95, and Macintosh software all offered from this site.

Cdnow
http://www.cdnow.com

All the CDs you could want and more. 165,000 products and extensive information on new and future releases highlight this service.

Amazon.com
http://www.amazon.com
Earth's biggest bookstore, Amazon.com offers more than 1,000,000 titles, an extremely cool Personal Notification Service (PNS), and special topical discounts from week to week.

ATLAS FOR WINDOWS

Atlas is the code name for the next-generation browser from Netscape Communications Corporation. Dubbed Netscape 3.0 by many, Atlas improves on many facets of the original browser. Most importantly, improved support for frames and tables correct one of the few weaknesses in the 2.0 release. Atlas also integrates several of the best available plug-in modules into the client, including a basic audio module for playing files of AIFF, MIDI, WAV, and AU sound formats; Live 3D for viewing VRML realms and experiencing distributed, interactive 3D spaces complete with text, images, animation, video, sound, and music; a video module for playing inline AVI videos; and a helper application called CoolTalk that allows for real-time full-duplex audio conferencing. Atlas currently lacks the inline HTML editing capabilities found in the Gold release of Netscape Navigator 2.0, but it should come as no surprise if future releases of Atlas add support for this feature. Atlas also brings support for Java to PowerMac and Unix users for the first time.

ATLAS FOR WINDOWS

Desc:	Atlas kicks some serious atlas — better known as Netscape 3.0
Pros:	All the great features of Netscape 2.0 and a whole lot more
Cons:	Beta release, lacks inline editing capabilities, mail and newsreader could be improved
Location:	**ftp://ftp.netscape.com/pub/navigator/atlas**
Filename:	**atls????.exe**
Status:	Preview Release - expires July 15, 1996
Company:	Netscape Communications Corporation
Website:	**http://home.netscape.com**

The unexpected and early release of Atlas is undoubtedly a response to recent Microsoft press releases touting the soon to be released 3.0 version of Internet Explorer, which is expected to continue the tradition of "borrowing" the best features of Netscape. For example, multithreading, frames, downloads with their own separate processes, and progressively rendered graphics are all examples of new Internet Explorer 3.0 features that have long been mainstays of the Netscape browser. The Internet Explorer 3.0 release is also expected to offer new proprietary features like support for ActiveX (OLE) Controls, Visual Basic scripting capabilities, compatibility with animated PNG and GIF graphic formats, and complete support for the next generation of web security, Private

Communications Technology (PCT). Once again, the top two browsers will up the ante in the intense battle of the browsers with these new releases. Many webulites wonder how long Netscape can continue to hold off Internet Explorer. Internet Explorer 3.0 may well narrow the gap , but with the release of Atlas, Netscape has once again shown that it can bear the weight of the world on its shoulders and still reign supreme.

GRAPHIC E-MAIL

Desc:	A multimedia mail client offering sound, graphics, animation, and more
Pros:	Multimedia mail — cool! Built-in automatic uuencoding/decoding, solid selection of features
Cons:	Both the sender and receiver have to use the client in order to get the full effect of the message
Location:	**http://www.clever.net/ge/free/**
Filename:	**gmail???.zip**
Status:	Freeware. Commercial version - **$25**
Company:	Graphic E Software

Graphic E-mail is the first of a new breed of mail clients for the Internet and is an excellent example of illustrating just how far Net applications have come since the early Unix days. No longer do your e-mails have to be limited to text messages; 'Graphic E' adds support for graphics (of course), sound, animation, music, and more. In addition to its extensive multimedia capabilities, this freeware client (a $25 "pro" package is also available) offers a multitude of standard mail features, including an efficient address book, distribution list capabilities, a built-in automatic UUencoder/decoder, a "launchpad" button (for running up to three of your favorite programs from within Graphic E), a spelling checker (in the pro version), and mailbox compression capabilities. While not quite on the same level as Pegasus Mail or Eudora Pro on a strict text-to-text basis of comparison, Graphic E is more than sufficient as a regular e-mail application. Still, multimedia is where Graphic E really shines.

Graphic E offers nine standard templates with a variety of graphical backgrounds, scrolling text, basic text, music clips, sound (WAV) bytes, images, and animation. These default themes include motifs for different occasions, including customizable formal letterheads, three types of postcards, thank you messages, "I Love You" notes, flame-mail cards (for your least favorite e-mail pal), and E-grams. The cool part of these multimedia capabilities is that only the text of the message has to be sent across the Net, but the recipient must also use Graphic E in order to get the full effect of the message. Graphic E also includes a Graphic Designer application for developing your own themes. This program allows you to use your own background patterns, music themes, starting and ending WAV sounds, scrolling banners, images, and animation. Overall, Graphic E is a ton of fun for users of all ages, and it offers an exciting alternative to the typical text-based mail client. But with the need for both the sender and receiver to use Graphic E-mail, it may be difficult for Graphic E to establish a strong user base in the near future.

WINSTOCK

Ticker	Price	Bid	Asked	Volume	Change
CCT	18.250			73000	-0.250
INTC	63.500	63.500	63.750	4795200	0.250
NSCP	123.250	123.000	123.250	1682000	-5.250
UCHM	7.500	7.500	7.875	17200	-0.250
WCAP	8.000	8.000	8.375	91700	-0.375

Desc:	Free time-delayed stock quotes and portfolio management over the Net
Pros:	Easy and efficient app for delivering free stock quotes straight to your desktop
Cons:	Stocks are always delayed by at least fifteen minutes, lacks a ticker bar, could be more intuitive
Location:	**http://www.teleport.com/~magoldsm/winstock/**
Filename:	**ws????.zip**
Status:	Shareware - **$20**
Author:	Michael A. Goldsmith
Website:	**http://www.teleport.com/~magoldsm/winstock**

WinStock, offered in both 16 and 32-bit versions, is a powerful client designed with the serious Net investor in mind. U.S. Stocks, Canadian stocks, mutual funds, bonds, and money market mutual funds can all be tracked and monitored by this client. WinStock complements the wide array of investment tracking capabilities with portfolio management, alarm tracking, proxy support, and ticker searching features. Information provided for each stock includes current trading value, daily and yearly high/low values, volume traded, percent changed, number of shares traded, bid and asked prices, and investment descriptions. In addition, WinStock offers you the ability to list those pieces of information that are most important to you and to discard information that you don't currently need. A ticker search feature allows you to find a stock or similar investment when you are not sure of its full name. The portfolio management feature gives registered users of WinStock the ability to track investments over time and automatically computes the value of your overall "Net worth."

WinStock lacks several features that could make it even stronger. First, WinStock lacks the ability to display stocks with the quite familiar stock ticker bar (as can be found in WinStock's primary competition, Quote Ticker Bar). Also, some of WinStock's features and commands could be made more intuitive, especially for novice users. Both the ticker search feature and the inability to sort stocks by other than the stock name stand out as areas that need improvement. Like its competition, and as with most any free stock service, the stock rates listed by WinStock are always delayed by at least fifteen minutes. WinStock is also limited to just one stock server for its information (if it's busy you're out of luck). Still, the cost of the client is just **$20,** which gives you unlimited stock quotes, access to the portfolio management capabilities, and a multitude of additional features. As with Quote Ticker Bar, what could be easier and better than having free stock quotes delivered straight to your desktop? ◆

PUBLISHING ON THE WEB

by Michael Erwin

PART 17 - BAKING BROWSER COOKIES

This month I want to introduce you to one of the least known and understood, but possibly the coolest HTML extension of all. So what is this wonderful new extension? Cookies. Yes, cookies.

Cookies are simple, small text data files that are stored on the end user's computer by their web browser. However, you will need to use CGI scripts to make — or should I say "bake" — a cookie. You can then use your web server to send this information to the user's browser. When the user's browser gets the information it will store the data on the user's hard drive. Later, when the user revisits our web site and uses a CGI script that requests this cookie, the browser will look to see if it has the requested cookie. If it does, the browser will send the information stored with and in the cookie.

This wonderful new extension was "baked up" by the fine folks at Netscape; NETCOM's Netcruiser v3.0, MS-Internet Explorer and Quarterdeck's Mosaic v2.0 browsers also support cookies. Not all of the people visiting your web site will be able to take advantage of cookies, but most will.

SOME COOKIE APPLICATIONS

We can use cookies for writing a CGI-based shopping system, in which the customer's selected items are put into a virtual shopping cart, which is really stored in the cookie.

You could store an individual's registration information in a cookie. So when users return to your service, you can use a CGI script to check and see if they already have an appropriate cookie. If they do, then you could have the CGI script retrieve it from the client side, and use the cookie data to build a custom HTML interface. It would seem to the client that the service already knew who was calling. After doing some end-user verification, you could arrange for the user to only have rights to certain features of your service. The cool thing is that you would not even have to ask them who they were, unless you wanted to.

The end users would only need to fill out a registration form once, and then we could store the information on the end user's computer, instead of using a huge data file stored on our web server, that we have to search through to get the information we need. Everything would be stored on the end user's system.

You could even use cookies as a form of virtual coupons. This could be a little incentive for the user to fill out a questionnaire form. Once they filled out the form the way you wanted, you could give them a "virtual coupon" cookie to be redeemed for some type of premium service. You could even set an expiration date, so that if they didn't use the cookie/coupon by a certain date, it would be void.

INGREDIENTS OF TASTY COOKIES

A cookie has several ingredients, like URL names, an expiration date, a PATH and a secure flag. This information is actually sent in the HTTP header of a document. Currently the format for a cookie is as follows:

Set-Cookie: NAME=VALUE; expires=DATE; path=PATH; domain=DOMAIN_NAME; secure

Set-Cookie: tells the user's browser that a cookie is about to be handed to the browser. The next attribute is the **name** of the cookie. This name can be anything you wish and of course the **value** associated with this name can also be anything. For example it could be something like: **NAME_OF_BAKERY =Torlones**, or **ITEM_NUMBER=CC295**.

There is a limit to how much you can put into a NAME and the associated VALUE. You are limited to 4k of data, but I don't know of anyone keeping 4k of data on a specific user. That should handle just about anything you will need.

The next attribute is the **expires** date. When this date is reached, the client's browser will delete the associated cookie and no longer give it out. To see the see syntax of expires, look at the following:

Set-Cookie: USERID=Jack_Rickard; expires=Tuesday, 01-AUG-96 23:59:59 GMT

In this cookie, the stored user id name will no longer be valid after Tuesday, August 30, 1996 at 11:59:59 p.m. It will be expired at that point, and the browser will not send that cookie out.

If you need to use spaces in the stored value of the cookie, you need to use the string **%20** instead of hitting the spacebar. So if I wanted the USERID to actually be "Jack Rickard" without the underlines. I could have done the following:

Set-Cookie: USERID=Jack%20Rickard

The **PATH** attribute tells the browser what directories are this cookie valid for. This attribute can get a little confusing, so bear with me. Take a look at the following cookie:

Set-Cookie: USERID=mikee; path=/bbs

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "*The WebMaster's Resource.*" It is available for US**$24.95**, plus US**$2.00** shipping in the United States or US**$5.00** elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information **mailto: mikee @eve.net**

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This tells the browser that any time it requests an URL from the site, and the URL is below /bbs, send the cookie **USERID=mikee** to the web server. For example, if we requested **/bbs/mainmenu.html** from the web server, along with the request for the document **mainmenu.html** it would also send **USERID=mikee**. It would also send **USERID=mikee** if the URL is **/bbsdocs/index.html**, since we told it that the cookie is valid for any URL using the path **/bbs**.

Now if we had set the **path=/**, then any URL we requested from the cookie's originating web site would cause the browser to send the cookie to the web server with the request for any URL at this site. If we had not specified a path, the cookie would only be sent if the directory is the same as the originating URL.

The **domain** attribute tells the browser what domain names this cookie is valid for. If we set **domain=.boardwatch.com**, this would cause the browser to send the specified cookie to any of the web servers at **boardwatch.com**. However this also depends on the contents of the **path** attribute.

Be aware of a bug in Netscape Navigator v1.1 and earlier. Cookies that have the path attribute set to / will only be saved if they have an expires attribute!

Only hosts within the same domain may set cookies to be used within that domain. Also, you have to have at least two periods in the domain attribute, and if you use a regional type domain name like **.k12.wv.us**, you need to have three periods in the domain attribute. This prevents someone from doing something lame like **domain=.com**.

If a browser is requesting a URL that meets the criteria of several stored cookies, it will send every cookie that meets the domain and path criteria with the URL request. Which results in the web server receiving the cookies sequentially, like this:

Cookie: NAME=VALUE; NAME=VALUE; NAME=VALUE; .....

ENTER THE CGI SCRIPT

So how do we set a cookie in our CGI scripts? Well we will need to have a section of script that looks something like Listing 1. In this example, I am using a small UNIX shell script. The CGI script creates the HTML header information and then sends the cookie, which is then followed by the rest of the HTML document.

LISTING 1:

CGI SCRIPT TO CREATE HTML HEADER AND SEND A COOKIE

```
#!/bin/sh
echo "Content-type: text/html"
echo "Set-cookie: UserId=mikee;
expires=Wednesday, 30-Jun-96 12:00:00 GMT"
echo "Set-cookie: Password=guess;
expires=Wednesday, 30-Jun-96 12:00:00 GMT"
echo ""
echo "<HTML><HEAD><TITLE>Welcome to
WWW BBS</TITLE>"
```

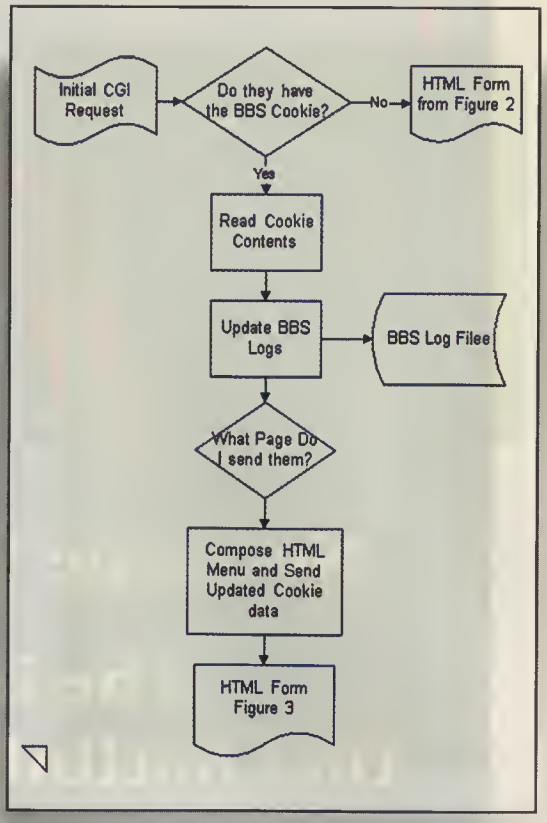

Figure 1: Flow chart of Client Interaction with Example Application

The CGI script above is hard-coded. That means we would have to write a new shell script for every cookie we want to send; we want a less labor-intensive procedure.

First we need to decide what information we need to put in the form of a cookie. Once we have done that, we need to decide where this information will come from. Is the information going to be generated on the web server, from an HTML form the client filled out, or possibly both. Look at Figure 1.

This is a simple flow chart showing how the end user is going to interact with a simple CGI registration service using cookies as the form of authentication. The first step is they request a URL which is really a front door to the service. To keep things simple we will make this HTML document a combination of items. (see figure 2)

Once the client submits the form shown in figure 2, a CGI script will be started to process the form data. This CGI application will take the information entered in the HTML form and generate several cookies, including one we won't tell the user about. The CGI script generates cookies for UserId, Password and initial Security level.

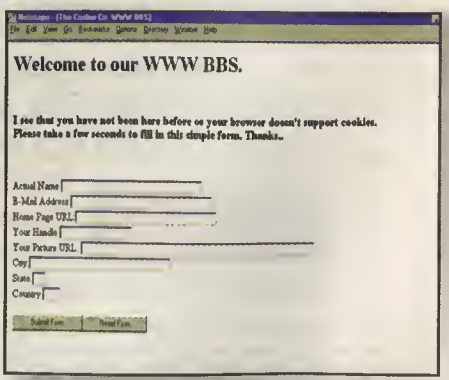

Figure 2: Initial Screen of the Example Cookie Application

Then it will send a thank-you and a welcome HTML

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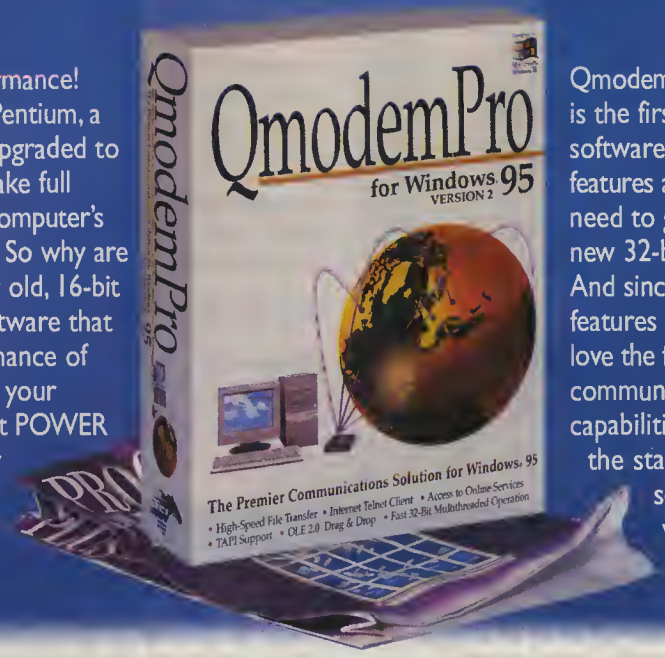

QmodemPro for Windows 95 is the first communication software that delivers all the features and performance you'll need to get the most from the new 32-bit Windows platform. And since you want dynamic features and ease of use, you'll love the fact that QmodemPro's communication and Internet capabilities go way beyond the standard terminal software included with Windows 95.

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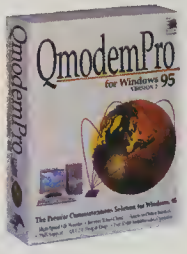
Designed for Microsoft Windows 95 + = 

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document (Figure 3). The user does not realize at this point that he has just received three different cookies.

Now when the user reloads the welcome screen, the browser will notice that there are three cookies for this URL. The browser will then send the three cookies with the request to load the URL. When the web server gets the request, it sees that it is to start up a CGI script.

The CGI script will actually look at the cookie contents, to see if the user has rights to access this page. The CGI script will also add an entry to the logs to record the user's return.

Users no longer need to worry about their registration information, because it just became automatic to them. System administrators see not only each web hit, but can look at the logs to see who actually is using the system. Clients don't have to worry about passwords and such.

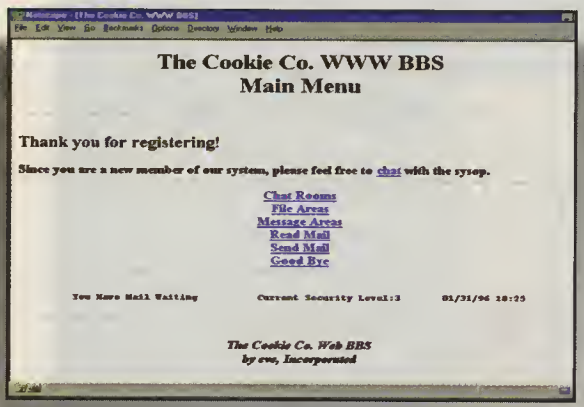

Figure 3: The Thank-You and Welcome Screen of the Example Cookie Application

We also get the ability to increase or decrease a user's security level, since we have included a Security value in a cookie. This creates a nice flexible system that is easily navigated by the client and manageable by the web master.

COOKIE CUTTERS

One of the better commercial cookie based software packages available on the web is ***OopShop - the Shopping Cart System***. (See **http://www.ids.net/~oops**) Since the system is being developed for commercial accounts, expect to pay around **$500** for it.

Jerry Yang, the author of this system, has even released a smaller version of the software that he published under the GNU General Public License, v2. He calls this software ***OopShop Free Cart***.

Cookies can offer the BBS community a way of adding some much needed functionality to Web BBSs. Cookies might help bridge the gap be-tween traditional BBSs and the new web based BBSs.

Now that I have shown you the basics of cookies, I want to see what some of you innovative programming creative geniuses come up with.

Till next month...◆

Michael Erwin
mikee@eve.net

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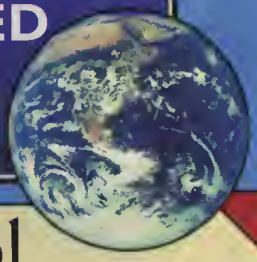

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WEB SERVERS DISSECTED

by Michael Erwin

MAY THE WEBFORCE BE WITH YOU!

The more I am around supposedly fancy hardware, the less impressed I am. However, I have always wanted to take a good look at some of those killer systems I've seen. Well, my wish came true: I was recently given the opportunity to take a look at a Silicon Graphics Incorporated (a.k.a. SGI) ***WebFORCE Indy***.

This has to be the sexiest computer I have every seen. (See Figure 1.) The system box is an Indigo Blue. (Hence the name "Indy.") However, the flat 17-inch Sony monitor, keyboard, 3-button mouse and video camera are wrapped in a beautiful gray granite.

Figure 1: *Silicon Graphics WebFORCE™ Indy™*

As you can already tell, this web server review is going to cover both hardware and software. So the normal "fairness" statement about the hardware used is thrown out the window.

Take a look at the hardware that makes up the WebFORCE Indy:

- RISC R4600 133mhz CPU
- 32mb of RAM
- 1gb SCSI HD
- 21mb/1.44mb Floptical Disk Drive
- 8bit Indy XL Video Graphics Subsystem, Running 1280x1024x256
- CCD Color Video Camera @ 640x480
- 2 Analog Video-in Ports, both S-Video and Composite
- Stereo and Mono Audio Inputs and Outputs
- Ethernet & ISDN
- Fast SCSI-2 Port
- *and* a 3-D "Stereovision" Eyeglasses port

SGI considers this their "entry" version. Yeow! They have a version of WebFORCE that can move data at 1.2 *gigabytes* per second through the system bus. Granted, only a few major web sites will *need* that much speed, but it's sure nice to have it!

The Indy™ also has a small physical foot print, 3" H x 16" W x 14" D. When I pressed the recessed little round button, a.k.a. Power, the Indy™ played a fancy tune that sounded as if it was coming from my Bose speakers. On-screen arrows let you adjust volume up and down – cool!

Now before you go out and buy one of these things, I need to tell you that it runs a UNIX variation called IRIX as the operating system. I wish I could say this does not matter, but it will to most of you. All flavors of UNIX can be a little tough to learn, and IRIX is no exception. But I will guarantee you that if you take some time and learn a little about UNIX, you will be hooked. I think that UNIX is the last refuge for the true computer hobbyist, and I know many of you would enjoy the challenge.

SOFTWARE

Here is where the WebFORCE system shines again, though you pay for the perks. The WebFORCE comes bundled with an amazing selection of software. WebFORCE includes Netscape Communications Commerce Server, which I talked about back in April, for secure transactions. It also includes Netscape's Navigator web browser.

SGI also includes their WebMagic Author software. (See Figure 2) This software allows for complete web site design. It uses an intuitive GUI that allows you to type text into the WYSIWYG HTML editor. WebMagic even includes a set of predefined templates to get your web site up and running as quick as possible.

The WebMagic Pro software also allows you to do just anything a web author would want. For example, you can draw and edit 2D and 3D images with another included software product called Show-case.WebMagic also has a suite of tools called the Indigo Magic

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "*The WebMaster's Resource*." It is available for US**$24.95**, plus US**$2.00** shipping in the United States or US**$5.00** elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information mailto: **mikee@eve.net**

Digital Media Tools. This suite of software gives you the ability to author and edit digital video, audio and images. The video input can come from not only the included IndyCam digital video camera, which does 640x480 pixels, but can also be from the standard video or Super video (S-Video), plugs on the back of the Indy™. You can then convert the edited video to MPEG, Cinepak, Quick-time or to SGI's movie file format.

The audio editing is also handled by the digital media tools. These audio tools allow you to do two-channel recording, mixing of tracks, editing, over-dubbing and effects processing – all accurate to 1/1000 of a second. You can also use AIFF, AIFF-C, AU and WAVE files for input or output formats. Once you have the movie and audio done, you can mix them both together for a finished product.

Static image scanning is handled by the included IRIS Impressario software. Impressario supports most of the SCSI-based desktop scanners available.

Figure 2:
SGI WebMagic Development Environment

Once you have all your movie, images and/or audio done, you can simply drag and drop them into your HTML document, and it will create the HREF links for you. When you want to create a URL link to other web sites, you simply highlight the text and enter their URL addresses.

SGI also includes with WebForce™ WebSpace Navigator. This is a 3D Virtual Reality Modeling Language (VRML) web browser. WebSpace ties into Netscape Navigator to provide both standard HTML and VRML integration in multiple windows. Matter of fact, you don't even have to uncompress the VRML files to browse them. It is one of the few VRML browsers that I really like. WebFORCE also comes with WebSpace Author, which allows you to generate VRML 3D "worlds" and even import 3D models from other software packages. This little scene-stealer lets you assemble a scene and create links from the 3D objects in the scene to other sites, or additional scenes. It's a killer product.

WebFORCE also includes two pieces of trial software. Soft Windows allows you to run DOS and Windows 3.1 applications. WebForce also comes with a trial copy of a Macintosh emulator, so you can also run your favorite Macintosh programs.

You also get Adobe's Photoshop and Illustrator, (which would cost you almost **$3,000** if you bought them separately). Last but not least, you get some of the coolest games, demos and other miscellaneous software I have every seen.

CONFIGURATION & ADMINISTRATION

The configuration and administration of the Indy is accomplished through a GUI system. You can also reference ALL of the system and installed software documentation online.

This leads to a slight downside of the WebFORCE. The box comes with only two small printed manuals, and all of the major documentation is only available online. I guess you can print it out, but that might take awhile. However, the online documentation is great.

You will use the Netscape Navigator to handle the Commerce Server configuration. (See April, 1996 Issue)

PERFORMANCE

Well it just blows the doors off my old standard test system, which was a P66 with 24 Mb of RAM. Recently I built a P120 with 32mb, and installed several Intel based UNIX variations: Linux, Free/BSD and SCO. However, the WebFORCE still outruns it.

Now I know that the P166 is out and the P200 are just around the corner. However, I have no doubt that the WebFORCE Indy will be still faster. SGI is not tied to the old compatibility issues of Intel x86 boxes. For example, PCI can not move data across the system bus at 267 Mbps or move 400 Mbps across the memory bus. The Indy can.

This leads to another thought. Last month I wrote that using O'Reilly's WebSite server, running on a single CPU P90 with 64 Mb of RAM connected to a T-1 with nothing else on it, you can totally saturate that T-1 with traffic. So if anything, you have power to burn.

However, if you have a high-volume site with a LOT of bandwidth requirements — such as Intra Nets, Corporate Sites or some heavy CGI applications – it's going to be hard to beat WebFORCE. If your requirements do outgrow the Indy version of WebFORCE, you can easily migrate to SGI's Indigo2 Extreme.

PRICING

"The difference between the Men and Boys is the price of their toys." Well, here is where we separate the men from the boys. The suggested price for the WebFORCE Indy is **$10,995**. But you get a complete web authoring suite that is second to none, which if bought separately would be **$495**.

You also receive SGI's VRML WebSpace authoring package, which sells for **$995**. Three thousand dollars worth of software from Adobe. Color video camera and video capture that is absolutely great. Netscape's Commerce Server and Navigator. Not to mention the performance of a Ferrari F1.

Let's break it down another way.

WebFORCE Indy

$500	WebMagic Pro
$1000	WebSpace Author
$1295	Netscape Commerce Server
$3000	Adobe Software Bundle
$1800	Sony Monitor
$700	Video Camera & Hardware
$800	32mb RAM @ $25.00 per MB
$400	1GB SCSI-2

$9495 Total

That leaves **$1500** for a killer system board, a "haul butt" CPU, a way cool case, spectacular video, audio, keyboard and mouse. Which doesn't sound bad at all.

Now all I have to do is convince my wonderful, dear, sweet, loving, wife Jacqueline that I have to have one of these! Oh honey....◆

AREA	RATING
PRICE	Thumbs UP
INSTALLATION	Thumbs UP
ADMINISTRATION	Thumbs UP
USER AUTHENTICATION	Thumbs UP
DOCUMENTATION	Thumbs UP
CGI HANDLING	Thumbs UP
PERFORMANCE	Thumbs UP
AUDIENCE	Medium to Heavy WebSites, intraNets, corporate Sites, WebSpace Authoring and Complex sites that may require Secure Transactions.

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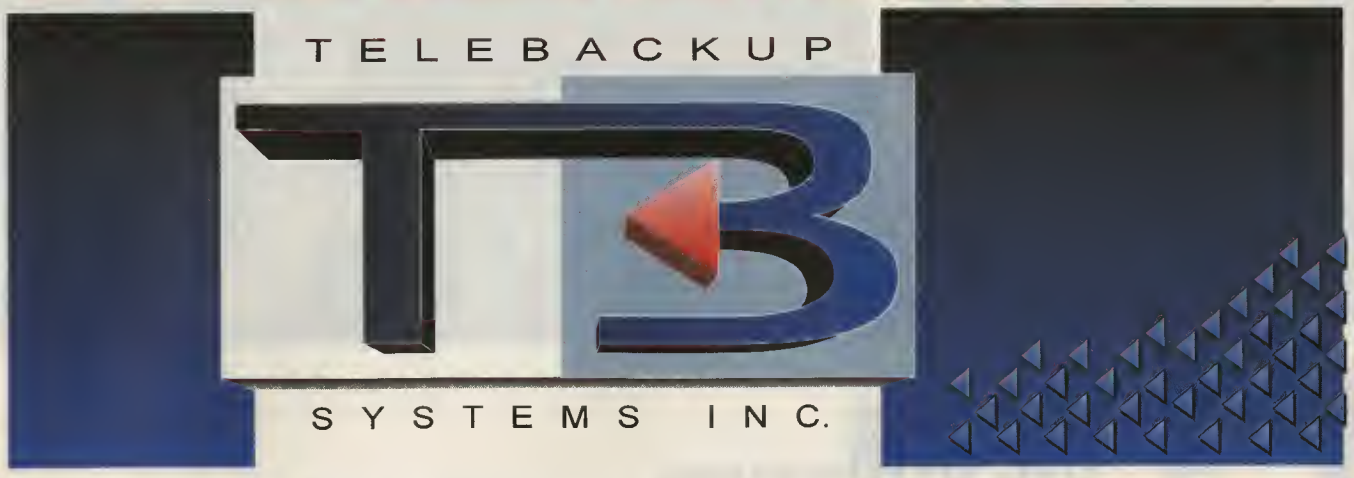

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- Full system backups and restoration, either online or to CD-ROM.
- Unix-based server platform and industry standard hardware configurations.
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- Utilizes standard telephone lines and modems. Also supports ISDN.
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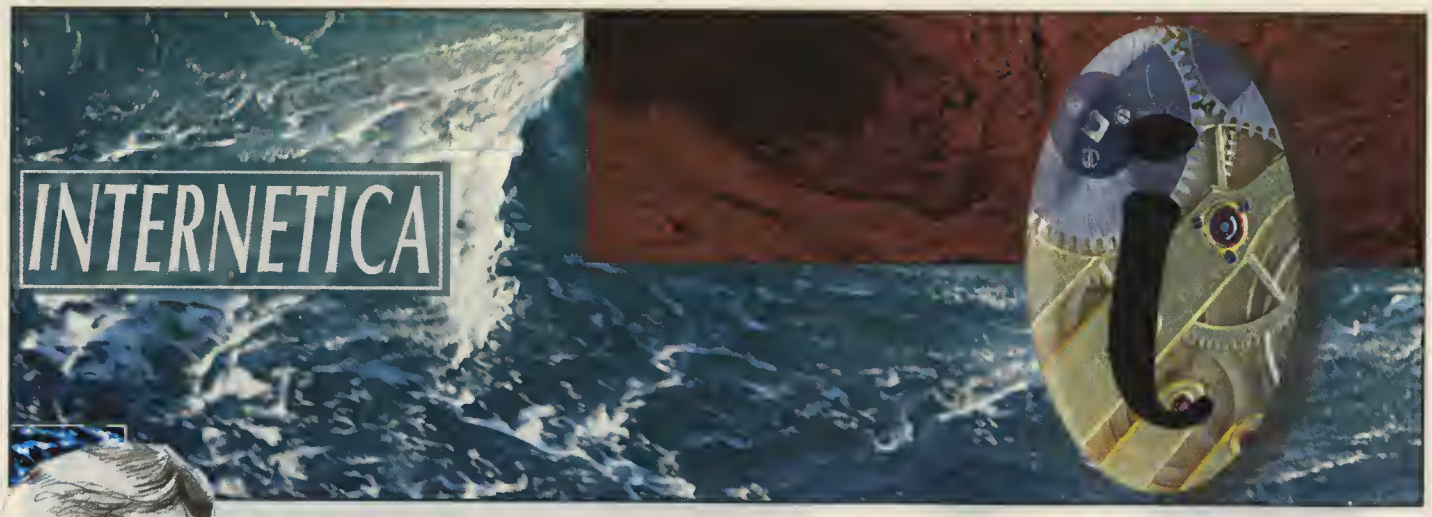

DR. BOB by Bob Rankin

Pressing All The Right Buttons: Jim Knopf, the Father of Shareware

Bob Rankin, known as "Doctor Bob" in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of ***The Internet TourBus*** and author of "***Accessing The Internet By E-Mail***", which has circulated widely on the Internet, and is available in 15 languages. Send e-mail to **BobRankin@MHV.net** or visit him on the web at **http://csbh.mhv.net/~bobrankin**

About fifteen years ago, Jim Knopf started a revolution without even trying. Knopf, inventor of the popular ***PC-File*** database program, had to find a way to keep his hobby from driving him to the poor house, so he began asking for a voluntary payment. Little did he know that his simple plan would strike such a resounding chord with the software-using public.

By eliminating the hassle of clumsy copy-protection schemes, bypassing the high prices of retail distribution and allowing potential customers to "try before you buy," Knopf forged a new industry on his basement anvil and came to be known as the Father of Shareware.

In 1982, Knopf had lassoed a dinosaur. Money was pouring into his mailbox, and in less than two years he was making ten times his IBM salary. Knopf left his day job and began to pursue his software business in earnest, assuming the pseudonym of ***Jim Button*** ("Knopf" means "Button" in German). ButtonWare grew into a multi-million dollar company with 10 products and over 30 employees, establishing shareware as a serious software marketing channel.

But ten years later, Knopf had suffered a heart attack and ButtonWare was on the verge of bankruptcy. After struggling to get the company back on solid ground, Knopf said good-bye to Jim Button and considers himself fortunate to have escaped with his life.

Today the 54-year old software maven stills does a little programming for fun, but is focused on enjoying his family in the peace and solitude of the Pacific Northwest. I chatted with Jim Knopf recently and discovered that he's a true Renaissance Man in the computer field with a fascinating story to tell. Here's a part of our conversation...

***Bob**: Tell me about your early experience with computers, Jim.*

Jim: My first computer I built from a KIM-1... a 6502 chip on a circuit board and had 1K random access memory and an LED control panel on board. You had to make your own power supply for it and build it up from there. So I bought the KIM-1 and with my son John started exploring microprocessors. Everything we did we had to do ourselves, and that was a lot of fun.

***Bob**: When you've got to write your own operating system, that makes jumping into the personal computer arena a little bit tougher... What was the time frame here?*

Jim: That would be about 1976. I guess you could say that John and I went into the service bureau at that time because we interfaced a Selectric typewriter to the KIM. I had a friend who wanted to be able to keep names and addresses and print out mailing labels for his accounts. So we set him up, wrote the software and let him come over to the house any time he wanted to print mailing labels for his accounts and leave a $25 or $50 check in a jar on the counter to help pay for our computer upgrade.

About 1980 we got an Apple II+ and then the IBM PC in 1982 or 1983, so we could stop writing operating systems software and compilers and start doing the easier stuff. We rewrote our program as a database program - I did the church mailing labels and we kept this other man's data files intact so he could continue to do his service bureau work. That's what PC-File was born out of.

***Bob**: Peter Norton called you the "Father of Shareware." Tell me how the whole concept of shareware originated.*

Jim: I was giving my program to so many people that it became an expense for me. The expense was in letting people know there was a new version of the program available, and in copying disks or mailing them to people who requested a copy.

This was becoming a drain on our little glass jar that I mentioned earlier. I had to think of some way to stop the negative cash flow. I hit on the idea of asking for a voluntary payment.

I reasoned that not only could I get the money to pay for the postage, but I could also weed out the serious users from those who didn't really care. I was sure that there were people I was sending letters to who didn't care anyway. I decided then to put a message with the program that said "If you care about this and want to get updates, become a subscriber and send me $10." And for some period of time I would continue to notify them of any updates and changes.

That was the original shareware message — a very simple request for voluntary payment. Andrew Fluegelman had developed the concept a little further. He wasn't as modest as I was, and he was asking for $25. He said in his message that he'd like to find other program authors who would join with him to market their software this way. One of my customers brought me Andrew's program, ***PC-Talk***, and said you've got to contact this guy. So I did, and we hit it off instantly. Practically the day we met, we decided to market each others product—to co-advertise is basically what we decided to do.

Bob: *Did you ever imagine that your hobby would become a multi-million dollar business, or that you'd ever leave your day job?*

Jim: No - I never imagined. It was entertainment on the evenings and weekends. That's all I ever intended it to be. I didn't go into to this with the idea that I was going to try and make some money and leave IBM. It was so successful in spite of this, and it became so successful that I reached a point where I had to decide do I want to throw this away and go back to life as it was before or do I want to ride the pony and give up life as it was. I suppose it'd be something like falling in love with a good mistress - you reach a point where you have to decide is this for me or not?

Bob: *What type of work were you doing for IBM?*

Jim: I was a systems engineer, kind of a technical marketing position. We did demonstrations and worked with the sales force. I had an office space provided by Boeing, working as a telecommunications specialist in this area. I was loathe to throw away my career with IBM, but at the same time I was becoming worn out and exhausted. I said to IBM, I have a dual existence—I wouldn't want to lose my job about it—here's what I do, and here's how I got started in it. And IBM said "Don't worry about it. It's a new world, we've never had anything like this happen before where we have personal computers that the employees are using, so we'll just look the other way while you continue."

The software business came to the point where it was producing more than ten times my annual salary at IBM. One year I took in $500,000 in the basement of my home with almost no overhead, so that was pure profit. I could not afford to pass that up. I could have if I hated it, but frankly, I loved it. So I had to say if I weren't working for IBM, if I was giving my full attention to my software business, wouldn't I be even more successful than I am now. That thought gave me the power to go to IBM and say I can't keep doing this, I'm leaving.

Bob*: To what extent do you think the online medium fostered the growth of the software business?*

Jim: I think it's playing a *big* role. When you look at things like Netscape, the Internet Explorer and the Eudora mail packages, all of those products are getting their exposure and their distribution via the online world. Distribute free software — a loss-leader approach — set the terms under which it has to be paid for and it's really big when you get into a world market. In fact Netscape really owes their existence to this idea of distributing free software.

It's the online distribution that makes it possible. And that's exactly the way that shareware got started. PC-Talk was so successful because it was a communications program. It combined the idea of online distribution with what it was doing.

Bob*: You mentioned Netscape... a lot of people are using it, but I don't know if a lot of people are paying for it.*

Jim: I just don't know how much longer they can continue to afford to give away the store. I think they probably can do that for a long time but they've got Microsoft right on their heels saying — hey, get Internet Explorer, it's free! I don't know how long Netscape will be in this game. I hope it's for a long time as I still like their product.

Bob*: Two of the major problems I see with shareware distribution are lack of accountability and a convenient payment mechanism. Do you see the Internet helping to address either of those problems?*

Jim: I think it has tremendous potential for getting payments out of people much easier. You're more likely to collect a payment than we ever were in the past. Used to be we had to put out messages saying "Please pay for this," and hope they'll get the checkbook, write a check and put the stamp on the envelope. Now it's so easy — an author can almost automate the whole process and can in essence ask for a payment without really having to irritate the user.

I really like the ability to pay for software online and to register it online. Click on the button and fill out a form or whatever. I think that's another real boon to shareware in terms of the online industry.

Bob: *Do you think there's still the potential for people to make it big in shareware?*

Jim: It is very crowded, but I think the potential is still there and may always be. One has to find the right niche, the right market. Whenever I used to speak people would always ask, "What is *[the right niche]*?" It was like the old question "What will be the next Visicalc?" Maybe Netscape is it, but we don't know ahead of time. There are a lot of marketing niches out there, as the Doom software people proved — you get in there with really nicely done stuff when no one else is there, and you can make a lot of money.

The bigger companies tend to be combining and going after the more lucrative bigger programs. If a guy is a one-man software company, they seem to be leaving more crumbs on the table. The person working out of his home doesn't need to have a million dollars in sales to be considered a success. That's the reason there are hundreds of shareware companies that are making a good living. I think the opportunity is still there—given the right product. Give it the right quality and market and sell it well, there'll always be opportunity.

Bob*: Did you ever personally run into the situation where a big company used scare tactics like "Don't buy that—we're coming out with the same thing next month?"*

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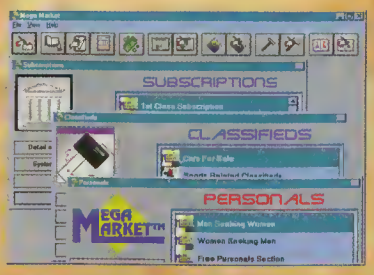

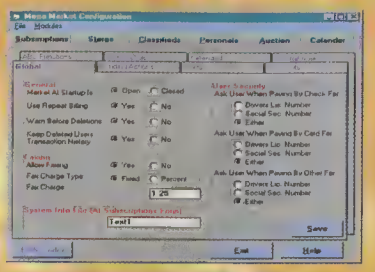

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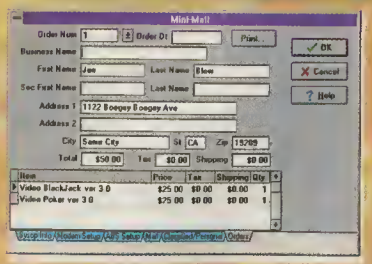

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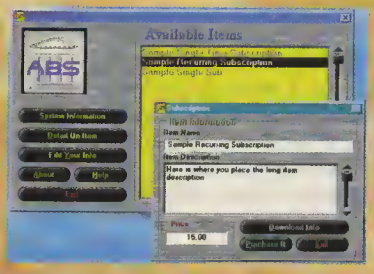

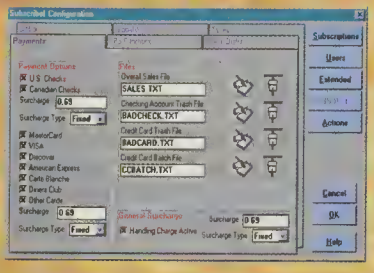

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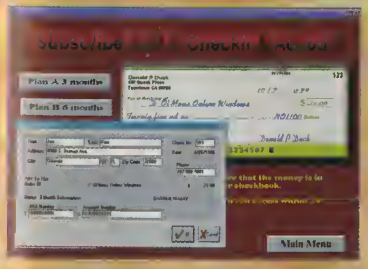

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Jim: I think the question really is can those big companies squash you with the threat of producing something in your category, but I haven't seen it happening. There's a bunch of people who would like to get their software from the little guy and that's why I marketed real hard on the "Jim Button" name. There's a loyal group of people who will always buy from the smaller company. That's how Apple stayed in it's niche behind IBM—there were so many people who just didn't want to buy from IBM.

***Bob**: I guess you never really know how many people try your product and like it but never pay for it.*

Jim: Ah, the Most Commonly Asked Question! What percentage of people register your product? In ten years I spent countless hours of spare time pondering that problem and what way there might be to determine the answer. I never came up with one. The category of the program, how the author supports it, how it's presented—all those things are a factor. The games and simple utilities probably get much lower registration percentages than desk top business programs that have become an integral part of the computer world.

***Bob**: Do you think the Internet has or will affect the shareware scene in other important ways?*

Jim: I think it has. The beautiful thing about the Internet is you can get on and sell to the whole world and spend practically nothing to do it. The distribution is much broader than we used to get in the early days of the IBM PC when all we had was computer clubs handing out disks. So I have to think it must be much easier to make a success of your product than it used to be. I think the Internet is a wonderful marriage for shareware.

***Bob**: So when did you first make the leap into the online world?*

Jim: I didn't start distributing and working online until after I got out of the software business, and that was because distribution was so difficult. PC-File became such a large program that it required many megabytes of storage in order to distribute it. That was just too slow for the online world. That's no different with Netscape and some of those other huge products where you download three or four megabytes at a time but it seems easier now with the 28.8 modems, ISDN and the other stuff that's coming into place.

It'll continue to get better and better, but online was never a very important distribution method for me. I got online out of my own curiosity about the time I was selling ButtonWare. I wanted to find out what this Internet stuff was. I got an Internet access account, started exploring, and I became quite intrigued and fascinated.

***Bob**: How big did Buttonware get before you divested yourself?*

Jim: Our largest point was somewhere over 35 employees, and we were doing over 4 million dollars of gross sales per year. That was as large as we got. At that time I was trying to get out of the business, just become an owner and let someone else run the thing. I was also considering selling it, but I couldn't find a buyer. So I went the route of trying to find someone to run the business, which was a mistake because I got someone to do it and my company was run into the ground.

When I finally discovered what was going on, I found we were very far into debt. So I had to take control of the company again and start working with the bank to see if we indeed had a future, which we did, but that was when my heart attack came. When that happened I said, "I'm getting out of here... If I have to give the company away, or just walk away, I don't care. I'm not going to die for it."

***Bob**: Is the Internet going to change the way personal computers are made?*

Jim: A lot of people are saying the direction is they're gonna build World-wide Web computers and that's all they do. You won't have to have a hard disk on your computer because your online service will provide that. Your computer is going to be just a little window with some memory and a modem on it to hook you up to the Internet and you'll just run the Web all day long. I'm having trouble identifying with that. I don't want to store all my data and files on some type of online service, and there's so much potential for damage by software being downloaded onto my computer and being run without me being able to say, "You run this" and "don't run that." That may be an old timer's look at the scene.

***Bob**: Any words of advice for budding entrepreneurs who may be thinking of following in your footsteps?*

Jim: This is a real good and a real common question. One of the most common e-mails I get is, "I'm a budding shareware author; what can you tell me?" As a shareware developer, I never had time to answer these letters as they came, and I felt I needed to provide the time. That's one of the reasons that I helped start the ASP (Association for Shareware Professionals) so that they could answer thse questions for me. They have resources and people available to answer those questions and I always refer budding shareware people to them and suggest that if they can afford the very low entrance fee, they try it out for a year or two to find out what shareware is all about.

My other piece of advice is that it takes a *lot* of work. Success in shareware is like success in any other aspect of business. The more you put into it in terms of time, skill and energy, the more you'll get out of it. That's what it all depends on. So don't become an entrepreneur of any type unless you want to devote a lot of energy to it. If you're not in love with it, if you don't have the dedication to devote yourself to it, you probably ought to be working from 9 to 5 as an employee.

***Bob**: You sold ButtonWare about two years ago... living happily ever after, I assume?*

Jim: Very happily.

***Bob**: So what keeps you busy today?*

Jim: A lot of hobbies. I have my flyfishing, I do some genealogical research, and I still program as a hobby. I have grandchildren, family and church activities to keep me busy from sunrise to sunset. I haven't had any days where I'm sitting around wondering what I'm going to do next. My garden, my home, I keep that up. Before I didn't enjoy it because it was a drag on my time and now it's an opportunity to get out and relax, and I'm enjoying it.

CONNECTING WITH JIM KNOPF

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ISP TALK by Bob Rankin

ALASKA'S MICRONET - SELLING MORE THAN A WIRE

Rich Mehner had no plans to become an Internet service provider when he put his own small business on the Net. All he wanted was an easier way to download the latest HP printer drivers. But when local people walked into the Anchorage, Alaska, offices of Lasertone Computers and saw the staff surfing the Web, they said, "Hey, you got Internet — how can we get it too?"

Mehner and his wife, Connie, were busy enough refilling toner cartridges, selling computers, printers and other hardware. Life was good. But here was an opportunity to fill yet another need for their customers, so they decided to see what they could do about it.

Mehner didn't actually think it would amount to much, but nonetheless in late 1994 he converted his 4-line First Class BBS over to a dialup PPP service. Within a week it was swamped by eager customers wanting a piece of his 56Kbps link to cyberspace. Facing a shortage of bandwidth, Mehner got on the horn to MCI and ordered two T-1 lines. He also had to upgrade his incoming service, and now sports 101 dialup lines to support the needs of his 2000 customers.

> ***"I had no intentions of becoming an ISP...and looking back some nights, I wonder why I did!"***

"I had no intentions of becoming an ISP, believe me... and looking back some nights, I wonder why I did!" says Mehner, but you can't argue with the numbers. Lasertone formed a separate division called MicroNet Communications which now accounts for 50% of his estimated **$5 million** revenue stream. The Internet side of the business is growing so rapidly that he projects it will account for 75% of revenues by year end.

Since Lasertone always was a business-to-business operation, it's not surprising that MicroNet offers a wide array of services to business customers. MicroNet offers PPP service, dedicated dialup and leased line accounts from 28.8K up to T-1 speeds.

But they do much more than just hand their business customers a wire. "We turnkey them — for a set price our techs come in, install all the software they need, configure their systems to work over the network, and even monitor their networks remotely," Mehner says. They also provide training for Netscape and other applications specifically oriented to each business. As an example, they instructed lawyers with the Alaska Bar Association how to get legal briefs for Alaska and the Supreme Court, and set up their web servers with pointers to relevant sites.

Mehner notes that anybody can provide dialup access, but not just anybody can provide value-added Internet services to businesses. In addition to providing the Internet connection, Mehner and his staff help customers develop web site, and they also act as a VAR for Mac and IBM hardware such as computers, printers and modems.

Mehner estimates that 10% of MicroNet's customers are dedicated-line accounts and says that number would be higher if he could get InterNIC to give him more IP addresses. "Full Class C networks are hard to set up because InterNIC says "Go to your upstream." But they (MCI) really make it really tough. I have to submit a complete network map every time I want to add a new IP address." Mehner has spent a good deal of time talking with both InterNIC and MCI, but their stumbling block seems to be concern over running out of IP addresses or routing tables getting too large.

Mehner has a few horror stories, such as a recent middle of the night DNS server crash. When 2000 customers can't get access, it does tend to cause "answering machine meltdown," Mehner jokes. Since Alaska has only one main fiber optic line down to the "lower 48," it can be big trouble when a boat drags an anchor on the line and snaps it. It takes weeks to fix, Mehner says, and the backup satellite links are intolerably slow.

Mehner minimizes the AT&T threat, saying "they've had more online systems than Liz Taylor has had husbands... and they've all failed, so that's the way we look at that." Aside from the fact that AT&T's WorldNet service is not yet available in Alaska, Mehner thinks AT&T has alienated a big chunk of potential customers by failing to provide Mac access software.

> ***"Service calls have dropped by one half since we started giving it [The Boardwatch Directory of ISPs] away"***

There's the personal service aspect as well, says the MicroNet chief. "We don't tell our customers we're gonna beat the big players on price, but if you call them or AT&T, you get voicemail."

MicroNet's operation uses Apple equipment almost exclusively. Even before Apple had an Internet solution, MicroNet had its own package put together and was successfully selling the hardware/software bundle. "We're using all Apple stuff because it's really plug & play — you turn it on and it works," Mehner says. "We plug our Apple into a customer's Ethernet alongside their NT's and OS/2 machines and it looks really strange. But they just put in a closet and it works."

Mehner is impressed with Maxim's NSO/Webstar web server and NetCloak, a combination which makes their system "pretty much bulletproof." He feels that the use of Apple software may actually make them less prone to hacker attacks, because the hackers tend to be UNIX-oriented. The only problem they've had so far was an FTP attack, where a malicious user filled up the 2GB hard drive, causing it to crash.

MicroNet has also stumbled on to a very interesting way to reduce customer service calls — they hand out free copies of the ***Boardwatch Directory of Internet Service Porviders*** to new customers. "We wrote all kinds of stuff to try to explain how to get set up, but service calls have dropped by one half since we started giving it away," Mehner told me. "We give them a copy of Microsoft Internet Explorer on a disk, point them to page 27 of the Guide and we never hear from them again!"◆

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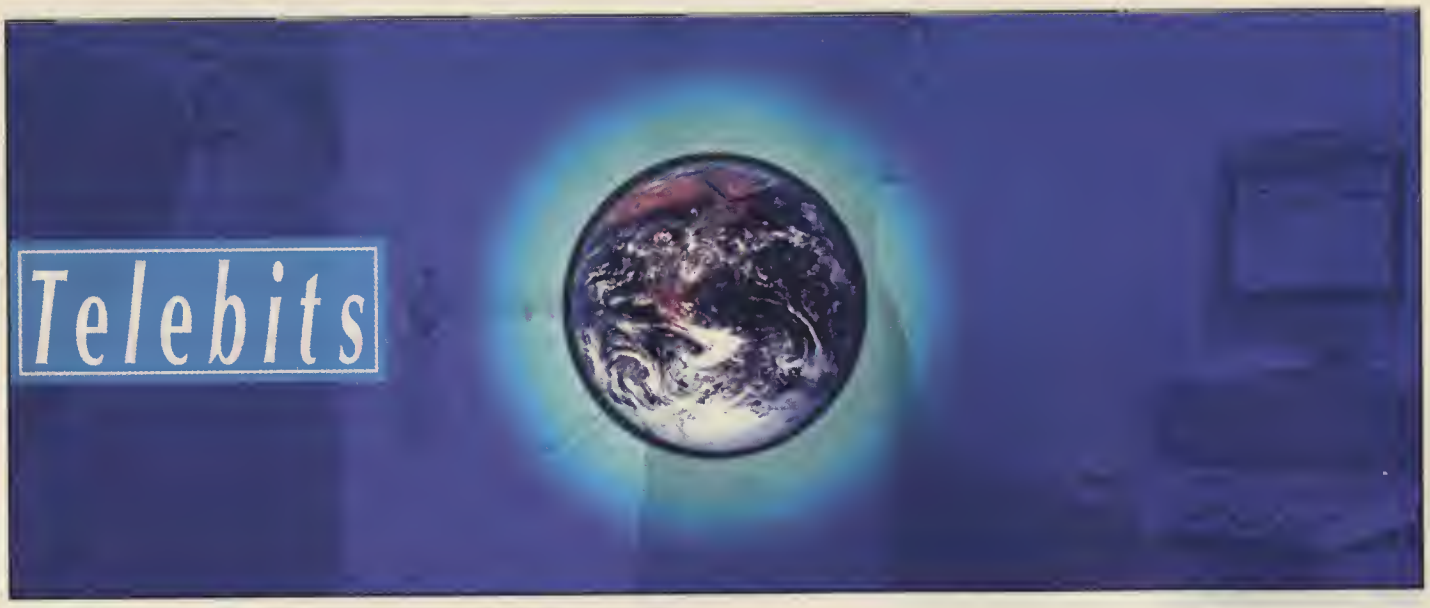

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If you've received a "notice of Domain Name Dispute" from Network Solutions, Inc., you are not alone. Over two dozen known cases are documented at the "What's In a Name" Web site — **http://www.law.georgetown.edu/lc/internic/domain1.html**. Georgetown University Law School students David Pauker, Stacey Halpern and Jonathan Agmon have compiled a vital resource for anyone who faces the loss of their domain name within 30 days, as NSI's dispute policy currently provides. The case studies include links to the affected sites, information on trademark law, discussions of the present NSI dispute policy and proposals for replacement policies.

FCC TO OPEN FREE, UNLICENSED DATA BANDWIDTH

We may not need to run fiber optic cable to every home, office and classroom to get Ethernet speeds down that "last mile." Spurred in part by Apple Computer's visionary proposal (see Telebits, September, 1995), the Federal Communications Commission is aggressively moving to allocate 300 Mhz in the 5 Ghz range of the radio spectrum for use by unlicensed, low-power wireless data communications devices. The proposed NII (National Information Infrastructure) Band would operate at 24 Mbps or more – enough to bring broadband data traffic to many simultaneous users. Wireless LANs and other NII Band devices would be limited in power output to a range of about 10-15 kilometers, just as Citizens Band radio transmitters are limited so that users in different areas can use the same frequencies. Longer range devices may be permitted for community networks. Numerous technical issues remain to be settled, but the FCC hopes to complete its rulemaking by year's end. You can track the progress of this rulemaking at **http://www.fcc.gov/oet**

WILDCAT! 5.0 WINS AWARD, ADDS BROWSER PLUG-INS

Mustang Software's Wildcat! 5.0 was selected as "Best New Internet Product" at the 1996 Federal Operating Systems Exposition. Nominees were judged by the editors of ***Government Computer News***.

Also in April, Mustang released plug-in versions of the WC5 client for Netscape Navigator and Microsoft Internet explorer browsers. With the plug-in installed, one can surf to a Web site, click on a WC5 function icon and enjoy chat, file up/downloads, public and private messaging, and all the other features of WC5 from within one's browser. Mustang is rapidly closing the gap between BBS and HTML. Mutang Software Inc.: **(805)873-2500** voice, **(805)873-2599** fax, **(805)873-2400** BBS, **http://www.mustang.com**

EXCALIBUR BBS BETA TEST FINALLY ENDS

Ending one of the longest pregnancies in software history, Eric Weber officially released v1.0 of his ***Excalibur*** BBS software on March 1; the first beta version was distributed in 1993. Excalibur is a high-performance, underrated Windows client/server system, last reviewed in our January, 1996, "Technology Front" column. The system's highlights include dial-up, LAN and Internet access, small fast-loading graphics, BBS-style live conferencing, bulletin boards, security and access control. Starting at **$99** for a two-line license, Excalibur has attracted some 10,000 registered users during its two-year gestation period. A host of third-party products are available to add just about any functionality you wish to Excalibur. We're sorry to see The Epic Beta Test end, but welcome Excalibur v1.0 to the world. Excalibur Communications, Inc.: **(800)392-2522** voice, **(918)491-0033** fax, **http://www.excalbbs.com** or **mail to:excalibur@excalbbs.com**

ATS RELEASES WIP CHECK PROCESSING SOFTWARE

Some online users prefer to pay by check, but too often they forget to mail them after logging off. The solution is online check processing, in which the user fills out an online form similar to a normal check which gives the sysop all the data needed to debit the user's checking account for a specific amount. Automated Transaction Services, Inc., is an estab-

lished leader in online check processing. Now ATS has released its Online Electronic Banking (OEB) package in a WIP (Windows Interface Protocol) form. WIP is a graphical Internet/dial-up protocol developed by Durand Communications and supported by Durand's Mindwire client/server system and NuIQ Software's PowerBBS. The WIP OEB module allows users to actually sign their checks in cursive script. The module is available free of charge until June 30. Contact NuIQ Software, Inc. at **(800)844-6526** or ATS at **(800)435-6981**.

CINEWEB VIDEO PLUG-INS FOR NETSCAPE 2.0

Multimedia authors can go on an orgy of creation with the ***CineWeb***™ collection of plug-ins for Netscape 2.0. CineWeb supports QuickTime (MOV), Video for Windows (AVI), MPEG (MPG), Autodesk animation (FLC) and Windows audio (WAV) and all other formats compatible with QuickTime and Video for Windows. JetStream™ technology makes it possible to view all files as they are downloaded. Movies can be looped, turned into buttons, used as server- or client-side image maps, linked to other pages, CGI scripts and other URLs. Digigami Corp.: **(619)231-2600** voice, **(619)231-2773** fax or **http://www.digigami.com**

NET-INSTALL SIMPLIFIES SOFTWARE DISTRIBUTION

Download a compressed file, make a temporary directory, unpack the file, run the setup program... it's almost more trouble than a new program is worth. But with ***NET-Install***, Netscape users can just click on an icon and watch the files fly. The program displays setup screens, creates directories, adds icons to the Windows desktop, and even includes an "uninstall" option. It can also detect the type of computer and operating system the user has, and select only the appropriate version of a program to download. Optional password protection lets developers control rights to access their programs online. The client-side plug-in is available free of charge. A 30-day evaluation version of the Publisher's Toolkit is also free; the permanent version costs **$149** until June 30, **$299** thereafter. 20/20 Software Inc., **(503)520-0504** voice, **(503)520-9118** fax or **http://www.twenty.com**

TAKE YOUR COMPANY PUBLIC ON THE NET

The Securities and Exchange Commission (SEC) has given tentative approval to one firm that created a Web-based market for its own stock. (See "Manning the Wires" this month.) A new company, ***Direct IPO***, plans to provide an online marketplace at **http://www.directipo.com** in which other firms can make direct public offerings. "We see an incredible opportunity to satisfy the unfilled investment desires of the technology-savvy public to create a portfolio of early-stage Internet companies," said chairman Michael Terpin. The minimum investment will be $1,000 per company. Direct IPO will take a "very small position" in each company listed. The Terpin Group: **(310)821-6100** voice, **(310)577-9646** fax or **mailto:rogoing@terpin.com**

ALLEGRA CARDS INTEGRATE ROUTING, REMOTE ACCESS

The Allegra family of ISA/EISA cards for PCs work with Windows NT or Netware servers to provide cost-effective, secure connections for LANs or remote users over ISDN or dedicated lines, at speeds ranging from 56 Kbps to 1.536 Mbps. An Allegra card eliminates the need for external CSU, CSU/DSU or NT-1 equipment to connect to leased or ISDN lines. Prices range from **$459** to **$1995**. US Robotics Corporate/Systems Division, **(708)982-5001** voice, **(708)933-5800** fax or **http://www.usr.com**

NTS INTERNET ACCESS SUITE

Internet Service Providers are often Internet Software Providers too. Newcomers to the Net expect to be handed a disk with the instructions "Insert in drive A and type Install." The ***NTS Internet*** suite includes a self-installing Winsock stack that supports speeds up to 115.2 Kbps, PAP and CHAP authentication, and an API that lets an ISP customize the look and feel of the dialer's user interface. Netscape Navigator 2.0, telnet and ftp clients, a newsreader and the Confidant e-mail program. Priced at **$24.50** per copy for 1,000 licenses; further discounts available for larger quantities. Network Telesystems: **(408)523-8100** voice, **(408)523-8118** fax or **http://www.ntsi.com**

BAY NETWORKS CHALLENGES CISCO FOR BACKBONE, ISP MARKETS

A little competition never hurts the customer. Cisco Systems has ruled the high end of the router market for years, but $1.7 billion Bay Networks Inc. is turning its attention to the high-speed backbone and regional ISP arena. "We've had the appropriate products for years," says press relations officer Jeff Brunings, "but haven't focused specifically on the needs of ISPs until now." Bay Networks' first coup is a deal with ANS, the Internet access division of America Online. ANS chose Bay Networks' Backbone Node Concentrator (BCN) over Cisco routers thanks to "flexibility in the routing code and better scalability." The BCN supports 104 LAN/WAN interfaces and up to 13 FDDI connections with up to 1 million packets per second. The company also sells a full line of LAN and ATM switches, hubs, routers, remote and Internet access solutions and network management applications. Bay Network, Inc.: **(800)231-4213** voice, **mailto:answers@baynetworks.com** or **http://www.baynetworks.com**

ISP PROFIT OPTION: OFFER TELE-BACKUP SERVICES

Everyone knows they should back up their data often, and almost nobody bothers. Backup disks should be stored safely off-site in case of fire or flood, but most disks sit atop the computer from which they were copied. One solution to both problems is to have your computer dial out to a secured server late at night and transfer backup data to the remote server. A pair of independent surveys indicate that 30 to 50 percent of businesses are willing to pay **$15** to **$20** a month for such a service. Telebackup Systems has a turnkey package for ISPs that provides secure, efficient telebackup services. The **$25,100** system includes a Unix server scalable for up to 75 concurrent sessions and custom software that can back up 2500 PCs per day. A 100-license end-user client program pack costs **$5,000**. Telebackup Systems Inc.: **(403) 283-3995** or **(800)537-6306** voice, **(403)270-3822** fax, **mailto:tback@telebackup.com** or **http://www.telebackup.com.** ◆

RURAL INTERNET ACCESS

by David Hakala

GREENING THE DIGITAL DESERT

One in five U. S. citizens lives outside of a major metropolitan area, according to the U. S. Census Bureau. The Internet is a toll call away for many of these people. Internet access in rural communities is as scarce as water in the Sahara, and priced accordingly. We often hear from readers whose long-distance phone bills for Internet use exceed **$100** a month, plus the charges of an Internet Service Provider (ISP).

But this "digital desert" is shrinking, thanks to small homegrown ISPs. Inch by inch, the desert is blooming. It's literally a "grass roots" phenomenon – more a biological process than an engineering project.

The first species to encroach on a desert's borders are tough little grasses that can survive on next to nothing. They enrich the soil and support numerous tiny creatures. Behind the grasses come larger shrubs which support even larger life forms. The ecology gradually changes from "desert" to "arable." Last to arrive are the huge thirsty trees and animals which, to survive, need all the help their tiny brethren afford. The Internet is invading rural areas in the same incremental fashion.

BBS operators were the first to bring Net access to rural America, and they continue to lead the drive. A growing number of local businesses who paid through the nose to establish their own direct Internet connections now resell connectivity to their communities. Private citizens pool their money to bring the Internet closer to home. Rural utility companies build regional networks that simultaneously support and depend upon local ISPs.

The fragile giants – telcos, commercial online services and long-distance companies – have not yet braved the digital desert. CompuServe provides local access in 480 cities worldwide, but Muleshoe, Texas, is not among them. AT&T "World" Net is a local call in just 200 U. S. cities. InternetMCI has modems in 106 U. S. cities, according to its web site. The big guys serve the big cities, where the pickings are easy. Rural residents — 55 million people — rely on local ISPs.

PILLARS OF VIRTUAL COMMUNITIES

Rural ISPs bring significant economic and social benefits to their communities. Small towns that want to attract employers or raise employable children need local, high-speed Internet access.

Internet service is increasingly important to relocating businesses; their attitude is, "If you're not on the Net, you're not on our list" of possible new homes. Existing rural businesses need the Internet to effectively compete in today's global market. Farmers and ranchers can find real-time weather reports, commodity and futures market prices, veterinary and agricultural information. Small manufacturers and artisans, resorts and tourist attractions, and local economic development agencies use the Internet to compete with more favorably located counterparts.

Most children of rural communities will move to metropolitan areas for college and at least their first jobs. They need the same skills as their city-bred peers to compete on an equal footing. Internet skills were recently cited as "important career skills" by over two-thirds of executives in a national survey. Inexpensive Internet access allows children to practice e-mail, online research and even programming. They can also gain project management, marketing and other real-world experience.

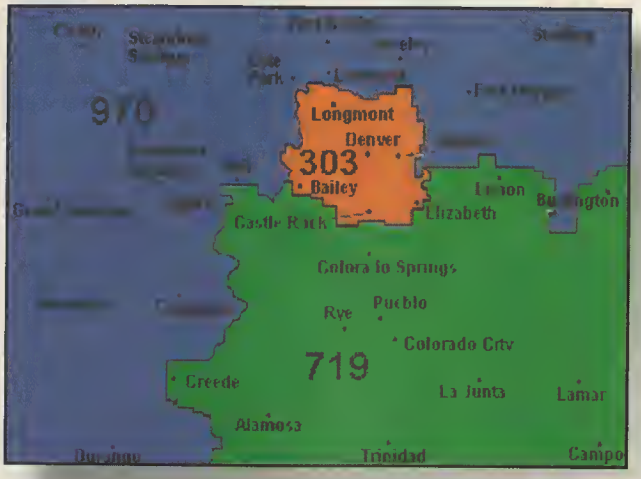
I wouldn't care to argue that Internet access improves the quality of rural social life. More likely, communicating with their urban brethren increases rural residents' appreciation for their pastoral settings. They can also partake of telelearning, telemedicine, cultural exhibits and other resources without enduring the Big City.

The ISPs who bring these benefits to rural communities have a mixed bag of motivations. Most have business plans. Some are crusaders bent on bringing the Internet home with little regard for profit. Some just "stumble into" the Internet business. (See Bob Rankin's "ISP Talk" in this issue.) But a few examples of rural ISPs reveal a common denominator – strong ties to their communities.

David Hakala first appeared in ***Boardwatch*** in March, 1989. From May of 1991 until he assumed the position of Editor at Fault at ***BW*** in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book ***Hot Links*** with Mark Eppley, CEO of Traveling Software, and penned his own book, ***Modems Made Easy***, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at **mailto:david.hakala@boardwatch.com** or at **(303)973-6038**.

COLORADO'S RURAL INTERNET ACCESS, INC.
http://www.ruralnet.net

La Junta is a farming and ranching community about 200 miles southeast of Denver, one of many small towns that dot Colorado's eastern plains. (See map.) The largest community hosts only 3,000 people. "Electric cooperatives have about 4-5 customers per line mile" in this area, says Keith Goodwin – but that didn't stop him from bringing the Internet to La Junta, then Lamar, Limon, Pueblo, Trinidad, Springfield and other small towns. Goodwin founded ***Rural Internet Access, Inc.***, with funds from three local families, including his own.



RuralNet Serves Colorado's Eastern Plains

RIA runs a T1 line 250 miles from its backbone provider, Network 99 in Phoenix, Arizona. Livingston Enterprises' PortMaster IRX router manages the backbone; dial-in/dial-out access is provided by Livingston's Communication Server. Leased lines run to Lamar and south to Springfield, near the Oklahoma border (and not much else). A large local-calling area around each of the three sites provides outlying towns with local-call access. The local electric utility company donated space for RIA's servers, and in return its customers get reduced prices on Internet access.

RIA sells 28.8 Kbps PPP access starting at **$19.95** per month, including the first 15 hours. Goodwin says 900 customers have signed up so far, and the customer base is growing at a 20 per cent monthly rate. RIA also offers 64 Kbps ISDN links for **$500** per month.

RuralNet's home page is thinly but diversely populated with business, civic and personal home pages. Six municipalities, 16 local businesses, four colleges, a local school district, the Otero County Health Department and a half-dozen individuals maintain web sites on RIA's server. The Stulp family is a classic: parents John and Jane raise "wheat, cattle and kids" in Lamar, while four of the five children study mechanical engineering (young Jensen is still in high school).

Rural residents have pretty much the same information needs as city-dwellers, with just a bit of local emphasis. Goodwin says his customers are interested in weather and agricultural news; commodity prices; staying in touch with family and friends via e-mail; and just exploring the rest of the world. RIA's home page provides dozens of links to arts, business, government and shopping sites.

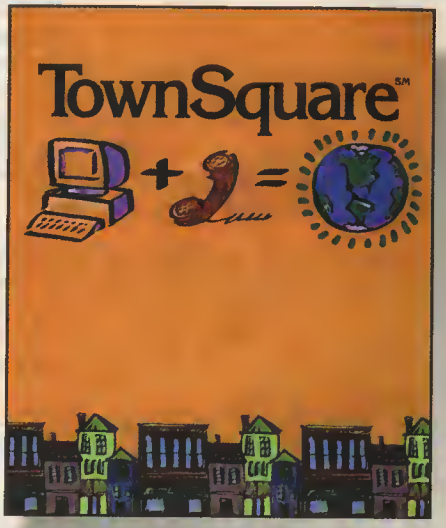
No government grants went into RIA; Goodwin says, "If we got involved with that, we'd still be filling out application forms." One man's evangelism, money from a few residents, and the support of local institutions bring the Internet to this corner of the digital desert.

RURAL PHONE COMPANY ALSO TOWN SQUARE
http://www.townsquare.net/sld

Some long-distance carriers fight to keep the Internet off their turf (see "The Sound of the Internet" last issue). ***State Long Distance Telephone Company*** of Elkhorn, Wisconsin (pop. 6000), has embraced the Net as another way to serve the community of which it's been a part for 96 years.

SLD was founded in 1900, just 24 years after Al Bell first called for Mr. Watson. Amazingly, Elkhorn already had *two* phone companies, but neither firm's lines went beyond the city limits to outlying farms. According to newspaper reports, "a promoter who came from Kentucky driving a pair of dapple-gray bob-tailed mares" persuaded local civic leaders to fund a new "wide area network." Three years later, four local farmers, including SLD vice president Charles Wiswell, bought out the Kentuckian. Today, SLD is run by its third generation of Wiswells.

SLD found the Internet expertise it needed in a new program sponsored by RBOC ***Ameritech Communications*** and national Internet Access Provider ***Concentric Network Corp.*** Ameritech provided the routers and T1 link (about 40 miles to Milwaukee), turnkey installation of servers and modems. CNC provides billing and help-desk services; SLD customers also have telnet access to CRIS, Concentric's online service, and all the telnettable BBSs available through CRIS' BBS Direct network.



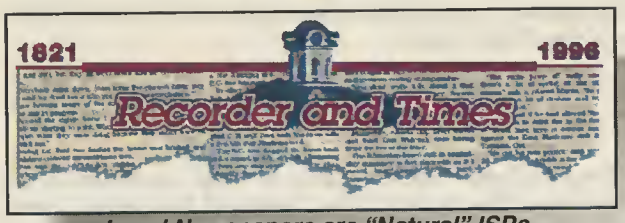
Elkhorn, WI
Toots its Horn on the Net

A flat fee of **$29.95** per month buys unlimited PPP access at 28.8 Kbps. Customers receive three disks of Windows or Mac software, and SLD even pays a consultant to provide in-home installation. About 120 customers signed up in the first six months, providing two percent of SLD's total revenues. Marketing/PR officer Susan Davey says that's "way ahead of our expectations" in a community better known for its musical instrument factories than its high-tech industry.

SLD's Internet strategy is simple and effective: buy technology from big, distant companies, and introduce it one-on-one to the customers who already know and trust you.

CANADIAN NEWSPAPER GETS NEW MISSION

Brockville, Ontario (pop. 18,000) has gotten its news from the ***Recorder and Times*** newspaper since 1821. Now Brockville's "window to the world" also opens onto the Internet. Newspapers are naturally positioned to sell Internet access, as



Local Newspapers are "Natural" ISPs

I noted in our June, 1995, issue. People read papers and surf the Net for exactly the same reasons – information, entertainment and to look like they're doing something cerebral. Readers have affinity for their local papers, so the marketing task is easier – especially when you "buy" ads from yourself.

The trick is keeping up with demand. The ***Recorder and Times*** went online with the ***CommunityNet*** publishing system (see our July, 1995, issue). The publishers figured they might as well add an Internet Protocol Adapter (IPAD) to the underlying TBBS/TDBS system and sell SLIP/PPP accounts. The paper advertised the service for ten days, then had to stop. Over 300 customers signed up in the first 60 days. That's quite a load for five people who also have a daily paper to put out, and the numbers are steadily growing!

Internet users pay **$25** per month for the first 60 hours (**$240** for a full year paid up front), plus **$0.50** per extra monthly hour. But expenses eat much of that revenue. Which leads to another subject:

DEDICATED LINKS ARE CHEAPER IN THE COUNTRY

The ***Recorder and Times*** pays a hefty **$2,880** per month for a 128 Kbps dedicated link – to a telco office just 160 yards away! A full T1 would cost **$14,050** per month – or **$154,550** per line-mile! Our "Cyberworld Monitor," Frank Sowa, pays about **$2,800** per month for a T1 link – to a Pittsburgh CO switch just 30 feet from his port. That's **$492,800** per line-mile!

Such obscene prices might scare off some would-be rural Internet access providers. But connectivity is actually cheaper in the boondocks than in the Big City. In the U. S., explains Sowa, "universal access" policies regulate the prices that telcos can charge in rural areas. But metropolitan customers are not so well protected from telco greed. The boonies get raped, but not as deeply as the city folks.

Robin Boyer of ***Nautilus Commercial Data Systems*** in Iola, Kansas (pop. 12,000) started his SLIP/PPP service with a 56 Kbps link to MCI's Kansas City Internet on-ramp. He paid Southwestern Bell **$940** per month for the 150-mile line, or **$6.27** per line-mile. MCI charged another **$500** per month for Internet access for a total of **$1,440** per month at half-ISDN speed.

Boyer now has a 256 Kbps link to a T1 pipeline in the Iola public library, about 2.5 blocks from his office. His monthly bill is **$600** – including Internet access, not just the leased line. Five times the capacity for 40 per cent of Southwestern Bell's price. What happened?

Local competition, of course. Twenty-nine Kansas rural telephone companies, with 232 to 6,000 customers each, pooled their money to build KINNET, a state-wide fiber optic network. Computerland of Salinas provides sales and customer service staff for some of the telcos. KINNET has signed up over 1500 dial-up subscribers at **$20** to **$30** per month since October, 1995.

KINNET also connects Internet resellers like Boyer, whose prices are competitive at **$10** to **$30** per month. But no matter who gets the profit, it stays in Kansas instead of going to San Antonio, Texas, home of Southwestern Bell's parent SBC Communications.

EAST TEXAS GETS TWO ISPs

The five counties surrounding La Grange, Texas (pop. 4900) are home to about 20,000 people – and two ISPs. Both got started in June, 1995. Between them, they have about 220 customers; this is the driest part of the digital desert. But both ISPs are optimistic about the future, and both report breaking even on these pretty slim pickings.

CVTV Internet (**http://www.cvtv.net**) is a subsidiary of the Colorado Valley Telephone Cooperative, a customer-owned utility company with 5,000 members. Its mission is to bring "big city" communication services to the area. Other divisions provide digital satellite TV and cellular phone service. The Internet group offers dial-up SLIP/PPP, domain name registration and Web site hosting services.

Mark Rutherford, VP/Project Manager for CVTV Internet, says the whole idea grew out of the co-op's desire to serve its members, not from a profit-driven spreadsheet. The few residents who used the Internet were spending as much as **$400** a month on long-distance service to reach the nearest ISP. More than 130 people showed up at the first Texas Rural Internet Conference, held in La Grange last June. That persuaded the co-op to start CVTV Internet, which is "paying its own way" with just 150 subscribers as of April, 1996.

Mark Cooper also attended the conference. Cooper is a WAN/LAN and general PC consultant, who moved to La Grange because it's midway between his main markets of Austin, Houston and San Antonio. For over a year, he paid IBM Globalnet **$110** to **$150** per month for Internet access via 1-800 lines, though he used less than 15 hours per month. "The access charges were killing me," says Cooper. He pondered starting an ISP business, but didn't quite have the capital.

A gentleman from Brazos Information Highway Services, 80 miles east in College Station, appeared at the La Grange conference with a proposition for the city fathers (sounds like State Long Distance's "promoter" from Kentucky). He would provide local Internet service if the city would provide a home for his server. Cooper struck a deal with the foreigner instead.

Cooper's ***Fayette Area Internet Service*** (**http://www.fais.net**) is very much a one-man show. Cooper "works from 5 a.m. till 10 at night, seven days a week" to run both FAIS and his original business, Technical Support Associates. The Type A entrepreneur also plans to open a community computing center in the near future. Somehow he finds time for a wife and five kids.

With 70 customers, FAIS is breaking even, a milestone many other 10 month-old businesses haven't reached. Older residents – 70 per cent of the population — are pretty set in their ways, explains Cooper. He banks his hopes on Net-savvy immigrants from the cities and the children now growing up in La Grange. He's prepared to stay the course.

CONCLUSION: HEALTHY ROOTS WILL SURVIVE

Much has been written (elsewhere) about "the coming shakeout among mom-and-pop ISPs." Some ISPs – small and large — will go under this year, and every year. That's life in the Wild Kingdom. The strong will survive, and in the digital desert it's the strength of your roots, not your marketing muscle, that counts.◆

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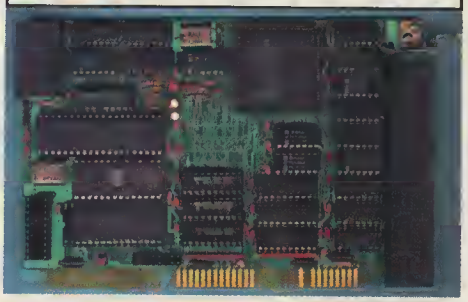

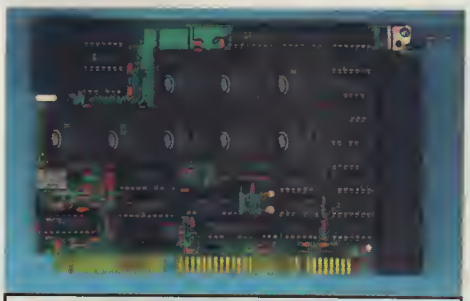

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Frank X. Sowa

WHO'S KEEPING THE U. S. DOMAIN NAME SYSTEM?

It happens all the time. The government in its desire to make taxpayers happy, decides to "privatize" a component of its massive bureaucracy, only to have the bureaucrats quit and take over the lucrative operation in the private sector — at a greater expense and with the same inefficiencies as before.

Frank X. Sowa is president of The Xavier Group, an international consultancy providing strategic planning, forecasting, training, and development of business and communications systems for organizations since 1981. As a certified software consultant for Softarc's First Class, and a reseller for other companies, he configures customized BBS systems for organizations, complete with "regular content updates." Sowa is also founder and sysop of SEED.NET (412) 487-5449, "the online incubator" for small businesses, a seamless BBS-to-Internet (PPP) provider, with business start-up assistance and seed capital available online. **mailto:** `franksowa@seednet.com`

Internet operations took this turn in December, when the National Science Foundation (NSF), in a no-bid contract award, turned over the domain name registration process to ***Network Solutions, Inc.*** (NSI), a 16 year-old privately-held company based in Herndon, Virginia.

"NEW" GATEKEEPER STUMBLES

NSI has actually processed domain names since 1993, when the company took over the DNS registration duties from the Department of Defense (DoD) Information Agency. Prior to that shift, the Defense Department and the U.S. intelligence community kept the records and screened domain name applicants — in essence, acting as the "gatekeepers" to the Internet.

But experience didn't stop NSI from stumbling when they took over the process without government oversight. It may take five to eight weeks to get your domain name registered through NSI. In the few months they have controlled the operation, NSI has been hit with at least 28 lawsuits regarding domain name filing problems and disputes.

NSI is collecting a $50 annual fee for each of the more than 270,000 domain names. It defends its inefficient handling of domain name registrations by explaining that it processes more than 600 domain name requests a day. "In the past 2 years, registrations have jumped tenfold," said David Graves, Internet business manager at NSI.

Domain names are assigned on a first-come, first-served basis. Like a telephone book publisher, Network Solutions presumes that an applicant has the legal right to use that name. Applicants are required to confirm this on their registration forms, but no checking is done unless a dispute arises.

LAW STUDENTS TRACK NSI'S FAILINGS

NSI has been hit with at least 28 lawsuits regarding domain name filing problems and disputes. Three graduate students at the George Washington University Law School — David Pauker, Stacey Halpern, and Jonathan Agmon — have documented these cases at **http://www.law.georgetown.edu/lc/internic/domain1.html**. The site discussions illustrate how vulnerable any domain name owner is to loss of a domain name on just 30 days' notice from NSI, without any of the usual legal safeguards against loss of a valuable property right.

Most domain problems stem from three factors:

1) NSI's failure to communicate with domain name owners.

2) NSI's failure to adopt a policy that protects domain name trademarks.

3) Former DoD policies regarding domain names.

Some domain names are clear violations of existing trademarks. But because the Internet did not allow commercial traffic until 1993, no one cared or disputed them. Now that commercial traffic is on the Internet, trademark holders are demanding that their properties remain protected on the Internet — in some cases stripping 10-years of name recognition from domain name holders.

But trademark disputes are just the surface of the problem. NSI has caused itself additional problems by not handling domain name disputes in a standardized manner. They have been accused of favoring multinationals and their own corporate clients over small firms, as in a dispute over filings by Procter & Gamble versus a small operator. Because NSI conducts dispute resolution deliberations in secret, one can only speculate about how disputes are actually handled.

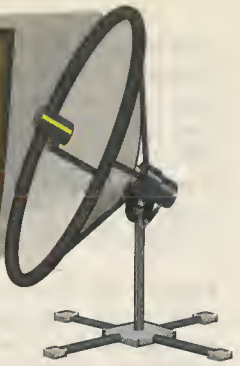
What is known is that NSI's Dispute Resolution Policy does not take account of common law or state registered trademarks, unfair business practices, dilution, or conflicts with even well-known marks. NSI's Dispute Resolution Policy is an imposed contract predicated on unequal bargaining power, failing to provide a proper mechanism for adjudicating disputes and allowing owners of a federally registered trademark to receive relief not dissimilar to a preliminary injunction — placing the domain name on hold during litigation.

MY PERSONAL EXPERIENCES WITH NSI

My own experience in obtaining a domain name was a nightmare. After calling NSI to request the proper documentation to file, I was told that I must send my registration by e-mail. OK. No problem. I fired up America Online and sent the form. The next day I received a response that my registration had been received.

Four weeks later, my application was returned with a note that the form was filled out improperly. My first attempts to call NSI to rectify the problem were met with a voicemail message that stated the offices

128K BPS SATELLITE DATA



In addition to our 19.2K satellite data delivery system, Planet Connect is now delivering data via satellite at 128K BPS. This state of the art system can conserve your Internet bandwidth or almost eliminate your long distance phone costs. Both systems offer a wide variety of data but the 128K system has the bandwidth to deliver a full Usenet feed. Here are some of the features of the 128K system.

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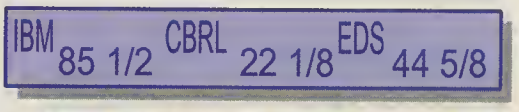
UPI NEWS AND PICTURES

Now your BBS can offer real-time news and information from one of the best known information providers in the world. UPI reports the national news as it happens and we transfer it to you via satellite. The complete text and pictures from UPI will give your BBS an image based system that will draw in a huge audience of new users.



STOCK MARKET AND FINANCIAL DATA

Surveys have often proven that financial data is number one on the list of data services that BBS callers are trying to find. Your BBS can now offer data from the major exchanges with hourly updates and closing prices. This service is very reasonably priced and allows a variety of display methods.

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were closed for four days due to the government shutdown. My next attempt was just as futile. The winter storm that shut down D.C. also shut down NSI. I guess that even though the Internet is global, the pipeline to get access to the Net runs entirely through a single office location.

Finally, six weeks after filing, I was able to get someone on the line after waiting thirty minutes. The NSI representative called up my registration, pointed out where I had erred, and suggested steps that I needed to take to correct those errors. I gave him the corrections over the phone — but I was told that those corrections must be made to my original electronic form and refiled via the Internet.

Six more days passed before I was informed by e-mail that someone else had applied for my domain names while my registration was sitting in limbo. Back on the phones again, I told the NSI representative that my domain names were federally registered trademarks, and that giving those names to someone else would be a violation of trademark law. NSI rectified the potentially damaging situation, but only because the non-profit who had filed for the name was willing to give it up.

Eight weeks after filing, with thousands of dollars lost while awaiting NSI's approval, I was finally able to initiate my ISP service.

From my discussions with others, this scenario is far too common.

"THE COMPANY" PURCHASES NSI

In March 1995, NSI was purchased by the largest employee-owned research and engineering company in the United States, a little-known company with $2 billion in annual sales and more than 20,500 employees worldwide, whose Board of Directors reads like a Who's Who list of former intelligence, federal laboratory, defense industry and military operatives.

"The acquisition of Network Solutions, Inc., is the key next step in our strategy of building a full spectrum, full service global information technology business," said Michael Daniels, sector vice president, Technology Applications Sector of Science Applications International Corp. (SAIC).

In other words, SAIC has initiated a strategic plan to control key access and technologies of the Internet on a global scale.

SAIC began as a small group of former nuclear physicists from Los Alamos laboratories, working as consultants on secret nuclear projects for the U.S. government in 1969. Today, SAIC is an international leader in systems integration, computer systems and software development, national security, FBI and law enforcement monitoring technologies, RSA encryption devices, information technologies and many other disciplines, according to their literature. They currently manage over 5,000 government and commercial contracts in research, development, services and manufacturing. They also manage government information and military contracts in 18 other countries including Russia, Great Britain, France and Germany.

SAIC — MORE POWERFUL THAN GOVERNMENT?

SAIC sometimes seems to dictate contract terms to government. The company recently won a contract for the U.S. Space and Naval Warfare System Command (SPAWAR). SPAWAR is the military's headquarters for command control information technology, including intelligence and surveillance, electronic warfare and peace systems. As a result of winning the contract, SAIC managed to have some impact on getting SPAWAR to relocate from Washington to San Diego, bringing with it 1,000 high-wage jobs and a $4 billion annual operating budget.

SAIC also won a $28-million contract to help the Department of Defense protect

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the security of its information and communications systems with advanced encryption tools. When you consider the ramifications of all of this government control, Internet control, and commercial control within the grasp of a single privately-held company — it's a bit frightening.

SAIC EXPANDING IN ALL DIRECTIONS

Some of the most critical defense and economic information systems running this country may be vulnerable to attack by individual hackers, organized terrorists, or even other countries, and certain defenses must be put in place. "Our ability to deal with information warfare is the major security challenge of the decade and possibly the next century," according to SAIC's Frank Jenkins.

SAIC, in an effort to assist the government in defending this country from information warfare attacks, has launched the Center for Information Strategy and Policy (CISP). The think tank's mission goes "far beyond just information protection issues to serve as a forum and research facility to explore and debate all aspects of information warfare; how the information revolution will affect conflict in the 21st century."

SAIC's goal is to corner, and perhaps control, the new cyberspace markets globally, delivering complete commercial information technologies, security and encryption tools, advanced computer simulation and Internet solutions worldwide.

CONCERNS RAISED ABOUT SAIC'S POWER

Quite a few USENET contributors are concerned about SAIC's concentration of power and control over the Internet. People are beginning to question SAIC's ability to control access to and manipulate the Internet. Most of these writers, of course, haven't got a clue as to what SAIC can actually do, and what its management's motives are.

It is evident that SAIC has more than just a business relationship with the intelligence and military communities. Over the past ten years, the firm has become an important policy advisor, and has actually taken over the management of key defense and intelligence information infrastructures.

SAIC now runs SPAWAR, the Internet's domain name service, and key encryption and security products, and is even shaping policies regarding anonymity and information warfare. The company has done all this in less than six months. The potential for a "Big Brother" scenario is definitely there — perhaps even probable.

WHAT SHOULD YOU DO?

With the government driving to regulate the Internet, and with companies like SAIC stepping in to ensure that Big Brother has the proper tools to monitor the Net, a person or business may well wonder what privacy is left. After all, SAIC states that it already has the ability to track "signatures," providing real-time network monitoring of Internet traffic.

We seem to have good reason to maintain traditional BBSs and alternative networks like FidoNet. Government defense planners have always sought backup systems as an assurance against "unfriendly network intervention." If you are concerned about privacy, perhaps you should take to heart the defense planners' strategy. Tracking and monitoring activity on the Internet is a monumental task. Tracking the Internet plus all of the echomail traffic that randomly passes through public switched networks may prove impossible. Maybe there will be a rebirth of BBSs as secure networks! ◆

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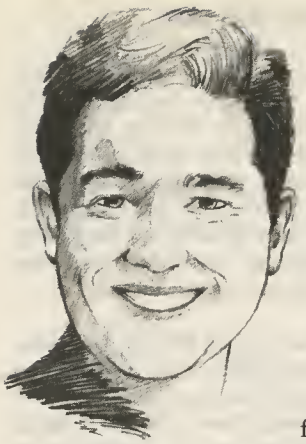


WIN95 COMMUNICATIONS

by Steve Jenkins

PRINTING, AND FAXING, AND HACKING (OH, MY!)

When Microsoft built Windows 95, I don't think they considered the growing popularity of the Internet. They focused a lot of attention on Win95 general networking abilities, but I really don't believe that they ever dreamed that some of the stuff in Win95 would actually work between remote (and I mean really remote) computers. Some of the stuff that can be done, Microsoft swore was impossible. I've had a lot of fun proving them wrong now and then, so I think I'll try it again.

This may be my last chance to do so in good conscience... By the time this article comes out in print, I will have joined Microsoft's Windows 95 Marketing Team. (An expensive way to shut me up, no?) I'll still write for ***Boardwatch***, and who knows? I may still get in a few jabs at Microsoft from time to time.

Politics aside, there are some amazing features of Windows 95 that still lie untapped. The two that I'll describe here really have the potential to upset a few people, especially those who own stock in long-distance companies. My advice? Sell now, before more people figure this out.

PRINTING REMOTELY

Peer-to-peer network printing has been one of Windows 95's most touted features, with good reason! For the last six months, this magazine has been presenting a multitude of ways to take advantage of this exciting ability. But printing over the Internet? That won't work...will it?

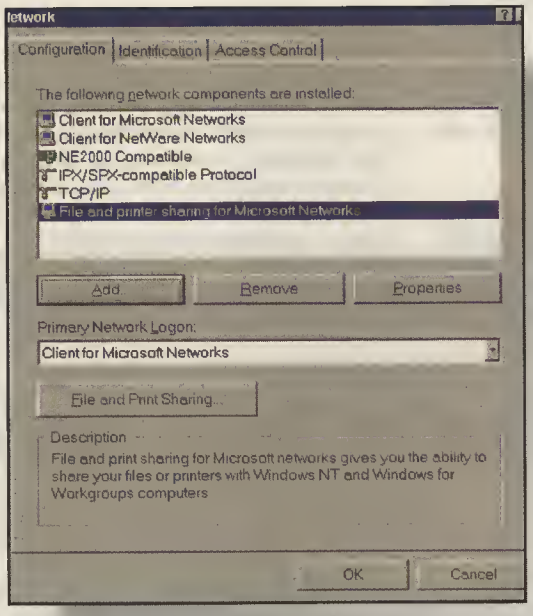
Actually, it works quite well. And why shouldn't it? The basic technology for printing to a shared printer on a machine in the next room or on the next continent is identical. Here's how to make it work in either case:

Step 1: Configure Peer-to-Peer Networking

Follow the instructions in December 1995's ***Boardwatch*** to install peer-to-peer networking. If you missed that issue, you can always get instructions at **http://www.windows95.com**.

Step 2: Verify your LMHOST settings

Make sure that the Win95 machine that is physically attached to the printer is entered in your **LMHOSTS** file. The LMHOSTS is like a mini name database that contains the IP addresses and NetBIOS names of remote machines. Alternatively, if both your machine and the remote machine are registered on the same WINS server (see December ***Boardwatch*** for an explanation of WINS), then editing your LMHOSTS won't be necessary.



Printers and Fax Modems Can be Shared Over the Net

Step 3: Verify that the Printer is Shared

Even if you're able to access the remote computer, it must have printer-sharing enabled in order for this setup to work. To share a printer, simply press **Start**, **Settings**, **Printers**, right-click the printer you wish to share, and choose **Sharing**. Fill in the pertinent information (including password if desired) and press **OK**.

Step 4: Installing Printer Drivers on the Client

Even though you'll be printing to a remote printer, Windows 95 gives you the same control as it would with a local printer. For that reason, the printer drivers for the remote printer must be installed on your machine. If you know the make and model of the remote printer, then that's not a problem. But there is a very simple way to do this without knowing the remote printer's specs.

Simply "Run" the remote computer from the Start menu, just like you would to access a shared remote folder. When the remote computer's shared devices are displayed, you should see a printer icon with the shared name next to it. Just double-click the printer icon; Windows 95 will detect its make and model and start the **New Printer Install Wizard** to install the appropriate drivers. You may be required to enter some information as it progresses, but in most cases, the defaults will be just fine.

Born and raised in Australia, Steve Jenkins moved to Portland, Oregon with his family in 1978. He is currently owner and Webmaster of ***Windows95.com*** at **http://www.windows95.com** which he administers from his two-bedroom apartment in Provo, Utah. Steve has a BA in French Literature, and is currently completing a Masters degree in Business Administration from the Marriott School of Management at Brigham Young University. He lives with his wife, Kay-Dawn, and his 15 year-old turtle, Sherman. Steve works as a consultant on Internet strategy to a number of firms, is an avid Netsurfer, and is one of the founder channel operators of ***IRC #Win95-net***. When not sitting in front of his computer being yelled at by his wife to "shut that darned machine off," he enjoys skiing, piano, karate, teaching, writing, and wishing his wife would let him back on the computer. Steve's love of computers started in the early 80s, when he saved up enough money to buy a Commodore 64. He still argues that the C64 is one of the most powerful and user-friendly systems to date.

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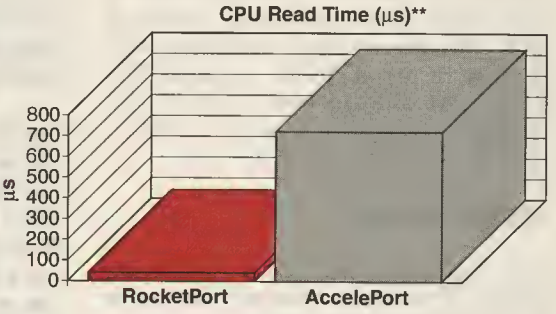

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SCO OK

yes It runs with UnixWare

yes NetWare Tested and Approved

*Based on published connect speed and retail price. All product and company names are trademarks of their respective companies.

** Measurement based on driver call times.

Step 5: Ready, Aim, Fire

Now you're ready to give it a shot! Once the New Printer Install Wizard is done, the remote printer will appear as a network printer in your **Printers** folder. Make sure that both your client and the remote machine are connected to the Net.

Now choose the remote printer from the **Printer Setup** dialogue of any Windows applications, like Microsoft Word. Type a document, or open an existing document, and print it to the remote printer. You can change any of the print options, just as you would if the printer were local.

Printing across the Internet takes a bit longer than printing across a LAN, but the average document will be sent in about 15-30 seconds. The document should come out of the remote printer a few seconds later. Sure beats faxing, right?!

FAXING REMOTELY

Is it really possible to control the fax modem of a remote system? You bet it is.. and it's lots of fun, too!

In order for this to work across a dial-up Internet connection, the remote computer must have an available fax/modem that isn't being used to connect it to the Net. If it has two fax/modems, then it will work. Better yet, if it's connected to a LAN that runs through an Internet gateway and also has a fax modem installed, things will work much faster.

This method works just as well for a peer-to-peer network of two computers side-by-side connected by Ethernet as it does across the Net. For this setup, you should think of one of the Windows 95 machines as the Fax Server and the other one as the Client.

Step 1: Install and Configure the Fax/Modem on the Fax Server

Kind of makes sense, doesn't it? Before you can access a remote fax/modem, you better make sure it works for the local machine.

Step 2: Install Microsoft Exchange and Microsoft Fax on the Fax Server

If Windows 95 detected a fax/modem upon installation, it probably tried to install the **Exchange** and **Fax** clients automatically. If it didn't, you can install both of these programs by selecting **Start**, **Settings**, **Control Panel**, **Add/Remove Programs**. Select the **Windows Setup** tab, and select the **Microsoft Exchange** and **Microsoft Fax** options. Press **OK** and make sure you've got your installation disks or CD handy. After installing, Windows 95 will prompt you to reboot.

Step 3: Share the Fax/Modem on the Fax Server

Open the **Control Panel** once again and double-click the **Mail and Fax** icon. The settings for the default Exchange profile will be displayed. If you see **Microsoft Fax** as one of the available information services, then double-click it. If you're using more than one profile, select **Show Profiles**, then select the appropriate profile. Now you can double-click the Microsoft Fax entry.

The Microsoft Fax Properties dialog box will be displayed. Select the Modem tab, and you'll see all available fax modems. Make sure the right one is selected (if there is more than one), and then check the **Let other people on the network use my modem to send faxes** box. You can give it a share name (I suggest something simple, like **FAX**), and then press the **Properties** button to the right. You can then enter a password for the network modem, just as if it were a shared folder or printer.

Step 4: Install Microsoft Exchange and Microsoft Fax on the Client

Now that you have the fax server configured, you must also set up Microsoft Exchange and Fax on the client machine. Follow the instructions in Step 2 above to install Exchange and Fax on the client.

Step 5: Configure the Client to use the Remote Modem

If you don't have a modem in the client, Exchange will prompt you for one when it tries to install the fax drivers. If you do have a fax modem in the client, then Exchange will assume that it's the one you want to use. We need to tell Exchange to use the remote fax modem instead.

Click through a couple of dialog boxes until you can get to the **Microsoft Fax Properties** dialog box, or go there directly from the **Control Panel**, as in the first part of Step 3 above. Press the **Add** button. Windows 95 will ask if you want to add a Fax Modem or a Network Fax Modem. Select the **Network Fax Modem** option and press **OK**.

You won't be able to browse for the remote fax, so you'll have to enter the remote computer and fax share name exactly. For example, if you are using a remote computer called **STEVE** and the fax is shared as **FAX**, then enter **\\STEVE\FAX** in this dialog box.

If the remote fax is password protected, you'll be prompted to enter the password, and given the option to save the password in your password list. Once you press **OK**, the remote fax/modem will appear in the **Available fax modems** window. You can double-click it to change the outgoing fax properties, which simply gives you a bit of control over how many times Windows 95 checks for outgoing faxes.

Step 6: Send a Fax

Once you've pressed all the OKs it takes to close all the open dialog boxes, you're ready to test the system. Open any application that can print (such as Microsoft Word), write your message or open a document, and choose the **Printer Setup** option. Change from your default printer to **Microsoft Fax on FAX**, and print away! Dialog boxes will prompt you for all the necessary information, such as fax number, name, etc.

You can also send an existing document as a fax by opening Microsoft Exchange and selecting **New Fax** from the **Compose** menu.

COMPLETING THE CALL

Once the information has been sent to the network fax, it will sit in the remote fax queue until the fax/modem is available. It will then dial out and complete your fax! This is a great way to send faxes within an office, or over the Internet! If you've got friends who want to share their fax modems, you can send faxes free in their local calling area! Now if only someone wanted to install a fax network in every calling area and send me the list of network fax names... Any takers?◆

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Notes From The Underground by Wallace Wang

WHY THE INTERNET THREATENS THE WORLD

The Internet is scaring the living daylights out of governments these days because, for the first time, the public can read information describing news that may conflict with the government's own filtered version of current events. Some governments are trying to regulate and monitor what people read and publish over the Net. China now requires its citizens to register with government officials if they have an Internet account. That way if the government doesn't like certain information distributed over the Internet, they can just clamp down on the few who might access this information through the Internet while giving everyone else (without Internet access) the illusion that censorship doesn't really exist.

Wallace Wang is the author of ***CompuServe For Dummies***, ***Procomm Plus for Dummies*** and ***Visual Basic for Dummies*** (all published by IDG Books) as well as ***Surfing The Microsoft Network***, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672@compuserve.com or bothekat@aol.com or bo_the_cat@msn.com

Censorship not only keeps people from learning alternate points of view, but it also directs public opinion towards an officially sanctioned opinion. After all, if the only information citizens receive consistently makes another country look like an evil empire whose sole purpose is to destroy the civilized world as we know it, then it's easy to drum up support for any military excursion that promises to eradicate this menace before it can infect the rest of the planet.

Ireland's Sinn Fein party is one Net-empowered political minority

Recently the controversy surrounding open communication has surfaced again. The British police claim that details of security installations in Northern Ireland wound up on the Internet, placed there by supporters of Sinn Fein, the political wing of the Irish Republican Army. According to the Reuters News Service, "Information posted includes details about British army intelligence installations, military bases and police stations."

British Parliament member Andrew Hunter, chairman of the ruling Conservative Party's Northern Ireland group, said he planned to raise Sinn Fein's use of the Internet with the British government, adding, "It sounds horrifying. I had no idea Sinn Fein was using the Internet."

Sounds scary, doesn't it? If Sinn Fein can ferret out such sensitive information as the location of security installations in Northern Ireland, what can stop them from exploiting weaknesses in the defenses of these security installations to jeopardize the lives of innocent soldiers merely doing their duty?

But stop and think. While it's true that Sinn Fein has links to the Irish Republican Army and that it's likely that some (but not necessarily all) Sinn Fein supporters and members have been publicly advocating peace while secretly blowing the limbs off innocent people, it seems instructive to at least take a moment and consider Sinn Fein's point of view.

We don't have to accept the blanket condemnation of the British government towards Sinn Fein. Instead we can use the Internet to do our own research, study alternate information ("propaganda") from both sides, and draw our own conclusions. And it's this kind of freedom that's scaring the living daylights out of all the world governments.

So at the risk of getting ***Boardwatch*** banned from magazine racks all over the United Kingdom, here's the address where you can visit the Sinn Fein home page and learn the "facts" from their point of view: `http://www.serve.com/rm/sinnfein/releases/pr032596.html`.

Sinn Fein disputes claims that they've published secret information about British military installations on their web page. The party claims that this so-called "secret information" is nothing more than data previously available in their own publication called "The British Military Garrison in Ireland," first printed in September 1994.

Hmmm, if this information has already been available in printed form for years, then it seems like the threat simply comes from making the information freely available to others through the Internet. So far this sounds suspiciously like Operation Sun Devil, in which the American government claimed that hackers had stolen proprietary information from the telephone company worth millions of dollars — when in fact anyone could buy that same information directly from the phone company for less than **$20.**

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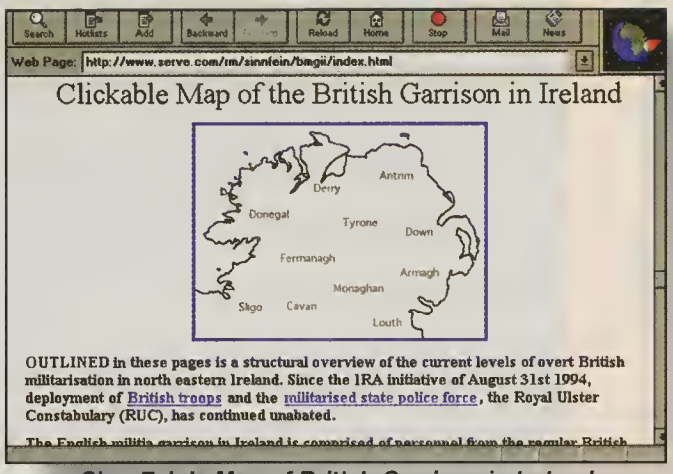

Sinn Fein's Map of British Garrison in Ireland

Reading "The British Military Garrison in Ireland" reveals that the British Army consists of 32,085 personnel scattered across 135 installations throughout Ireland. There's even a clickable map that lets you see the location of British barracks, spy posts, checkpoints, and heliport facilities in different parts of the country. While the British probably aren't publishing this type of information in their tourist brochures, the threat seems to come simply from the fact that Sinn Fein organized and collected this information. If anyone but Sinn Fein displayed this same map of British military installations in Ireland, would the British government even care?

If a web site in Iraq or Libya displayed a map of American military bases throughout the Middle East, we might be horrified that terrorists were plotting to blow one of them up. Yet if this same map appeared in an article in ***Time*** or ***Newsweek*** (as it has), would the American public feel threatened?

In case you feel that getting information from Sinn Fein is like getting information from Saddam Hussein, visit the Troops Out web site, created by a British organization that believes that the political and military trouble in Northern Ireland is a direct result of the British presence there. To visit the Troops Out web site, hit: **http://www.serve.com/tom/index.html**.

The Troops Out Movement organization has offices in London (you can bet that those offices have never been targeted by IRA bombs) and claim that they're an open, democratic organization that isn't aligned with any particular party or faction. They even offer their Troops Out magazine online so you can browse through the articles and learn more about this crisis from a different British point of view.

For those still convinced that Sinn Fein is nothing more than a terrorist organization, read an article published in ***The Economist*** (**http://www.economist.com/issue/02-03-96/sf1.html**) that questions the definition of terrorism in the first place. To many Israelis, Yasser Arafat is a terrorist leader. To many Arabs, the Israeli Defence Force are the real terrorists. The article simply points out that terrorism can be defined differently, depending on how you look at it.

The American government propagates the belief that Iraq, under Saddam Hussein, is a terrorist state. And yet does anyone remember the eight years of war when Iraq fought Iran while the United States supplied Iraq with military weapons and supplies? If the media is objective, how come ABC, NBC, CBS or CNN never brought up this point during Desert Storm and questioned whether American soldiers could be killed by Iraqi bullets or bombs bought from American companies?

Of course, not everyone may believe what they read in a well-known and respected publication like ***The Economist***, so jump to The Terrorist Page at **http://www.gyw.com/terrorism/**, the Counter-Terrorist Page at **http://www.terrorism.com**, and the Perilous Times Terrorist page at **http://www.teleport.com/~jstar/terror.html**. All three web sites offer plenty of articles and links to help you better understand terrorism and its existence throughout the world.

You can earn yourself a hefty **$4 million** reward by turning in any terrorist wanted by the American government. For more information on this way of becoming a millionaire that gives you better odds than any state lottery, visit the U.S. Department of State's web site at **http://www.heroes.net/pub/heroes/index.html**.

Terror and Counter-Terror Find Equal Footing on the Net

After browsing through all of the above web sites, do you still think the issue of terrorism is as clear-cut as you might have believed before reading this article? While killing people should never be justified for any means, it seems clear that accepting the filtered information from any government is likely to give us a distorted view of the truth as much as accepting any propaganda from any terrorist groups as well.

By using the Internet to publicize, share, and distribute information, we can all become better informed about events from around the world. While we may not always agree or like the type of information we find on the Internet, the alternative is to let our governments decide what we can and cannot read, see, or hear.

And that possibility is more frightening than all the terrorist threats put together.◆

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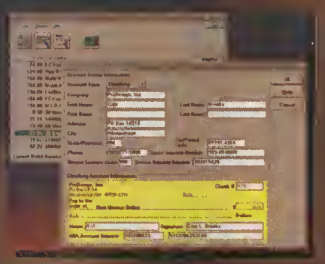

Plus, if you're currently using an online subscription or checking module, you can upgrade to MIDAS for only $65.00. This price includes the MIDAS software, normally sold for $179.00, and it waives Automated Transaction Service's setup fee for a check processing account, normally $99.00. That means you'll save over $200.00, and you'll be taking checks for subscriptions in less than a day.

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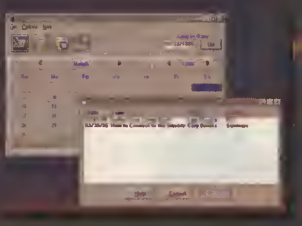

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THE SOUND OF THE INTERNET

Voice/Video On The Net

by Jeff Pulver

Jeff lives in Great Neck, New York (although one could argue he really lives on the net and sleeps in his home in Great Neck). These days Jeff is a self-proclaimed "Net Technologist" and publisher of ***NetWatch*** (**http://www.pulver.com/netwatch**), a web magazine which tracks enabling net technologies with a specific focus on audio, video, marketing and services on the net. He is also the project manager of the Free World Dialup experiment (**http://www.pulver.com/fwd**), and the moderator of several mailing lists including: ***VON***, ***NetWatch*** and ***IPhone***.

You can e-mail Jeff at **mailto:jeff@pulver.com**

1996 has been an exciting year for VON technologies. As each month goes by there have been significant contributions to the VON marketplace. In fact, each month the number of visible players keeps on increasing. In an article entitled "Wrestling over the Future" (***US News and World Reports***, April 15, 1996), John Simons states that the size of global VON marketplace "... is expected to grow from $3.5 million to $70 million by the end of 1996." At this rate this could become a billion dollar industry by the year 2001.

VON NEWS UPDATE

WebPhone: In April, 1996 Netspeak Corporation (**http://www.netspeak.com**) announced that WebPhone was finally out of beta and available for sale. Over 40,000 people took part in their beta program. I'm sure it won't be too long before the shrink-wrapped version of WebPhone is available in the software distribution channels and in your favorite computer store.

Internet Phone™ VocalTec and Dialogic (**http://www.dialogic.com**) announced a gateway product which provides a hardware solution for interconnection of the Internet and a corporate PBX. Still no word on the ship date for the Mac version of Internet Phone, or full duplex support for WindowsNT.

VDOPhone: VDO Corp., makers of the VDOLive streaming video plugin product, announced VDOPhone (**http://www.vdolive.com/vdophone**). VDOPhone provides a real-time audio soundtrack with the ability to transmit and receive up to 5 to 6 frames per second.

VON PRODUCTS OF THE MONTH

My favorites for this month are ***TeleVox*** from Voxware (**http://www.voxware.com**) and ***FreeTel*** from FreeTel Communications (**http://www.freetel.com**). One of the things both of these products have in common is that they are available on the Net for free.

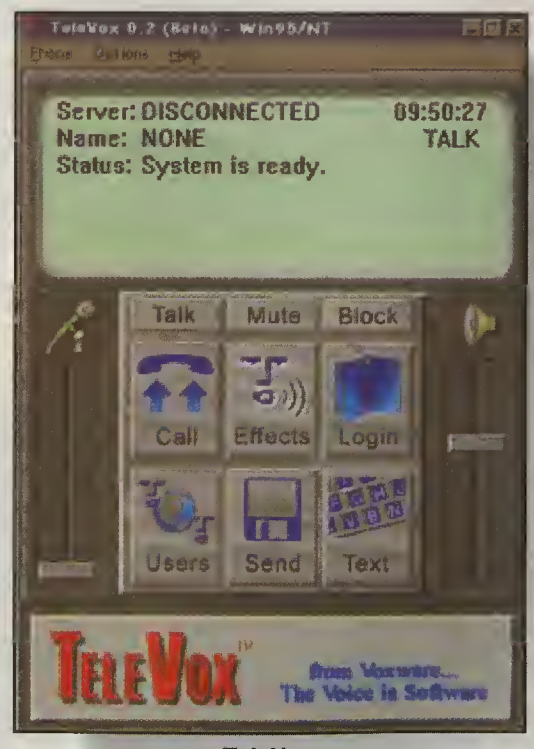
Both products are also server based — in order to find other users of each product, one needs to access their respective proprietary servers. In general the server is used for directory services — it manages the list of current users one could call. Calls do not actually go through the server.

One of the open issues with server based Internet Telephony in general is how scaleable this model really is? Not that anybody is talking — but what happens when/if several thousand people decide to descend upon FreeTel and TeleVox at the same time? Can their server support so many simultaneous connections? What about the other server based products — including Webtalk and IPhone? What is the real maximum number of sustainable simultaneous server connections?

Interoperablity. Still not here. So far this year there have been two opportunities for the players in the VON marketplace to get together and the majority have signed on and stated there goal is to become interoperable. Interoperablity can mean many things - and I hope these extend to beyond just supporting an additional Codex. Anybody willing to take a guess when interoperatblity of VON products really is going to happen? End of 1996? Maybe mid-1997?

TELEVOX

Voxware recently acquired the rights to ***Cyberphone*** and has revamped the product as ***TeleVox***. TeleVox works with either Windows95 or WindowsNT.



TeleVox:
Voice and Text Chat

Looking at TeleVox for the first time, you can see that the designers, for whatever reason, chose to stay away from the conventional phone motif. Instead you have six icons on the screen and direct access to the

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microphone volume and speaker adjustment. TeleVox reminds me of PowWow in the sense that not only can one establish voice communication between two parties, but once communication is established you can engage in a text chat and send files between two parties.

Some of the features included with TeleVox are:

- Full Duplex
- File Transfer
- Text Chat
- Caller ID
- Call Blocking
- Automated login/logout
- User-defined groups
- Netscape interface to web pages associated with "announcements"

The "special effects" features of TeleVox make some interesting sounds. But when you are speaking with Jan F. from Norway struggling to understand what the other party is saying, the last thing you really care about is adding an echo effect or making your voice sound like a robot. These Voxware tools really do sound cool — but, except for "having fun" I wouldnever use such a feature.

The "minimum" system requirements for VON products keep moving upward. TeleVox is no exception. Although the product will run on a 486/66 with an 8-bit sound card and a 9600 bps connection, it is recommended that you run TeleVox on a Pentium class machine with a 16-bit sound card and a 28.8 Kbps connection.

Just like other server-based VON products (i.e., FreeTel, WebTalk, Iphone), as soon as you log into a TeleVox server you can click on the users icon and see who is available. One neat feature is "call blocking." If you don't want to be disturbed, you can enable this feature and should somebody else attempt to call you, they will get a message that you are blocking your calls.

Some of the configuration options for TeleVox are as follows:

Playback delay controls the amount of time before speech is played back. The value of the delay can range from 0 to 2 seconds and it is set using a slider bar in the Configuration window. If your conversations sound choppy you might want to increase the value. For other operations the default value should be fine.

Pause Window controls how quickly TeleVox will stop transmitting when you finish speaking.

Trigger Level allows TeleVox to adjust to the sensitivity of different microphones. This is a rather useful feature when trying out various microphones.

Groups are private chat areas you can create on a TeleVox server. No other users will know that the group exists, unless you tell them about it. If you know the group name, you can add it to your group list and then access the other users in the chat area. A possible improvement would be to password protect access to these private chat areas. The TeleVox Family group is a place where conversations are supposed to be appropriate for users of all ages.

FREETEL

The shareware version of FreeTel displays periodic sponsor ads while you're talking – a novel combination of nagware and digital advertising. If you don't want to see the ads, all that you need to do is pay **$29.95** to register the product.

FreeTel: Ads As Nagware

At the moment the jury is still out on whether or not enough people would be willing to pay anything in order to turn off the ads. Earlier this year, Pointcast Communications (`http://www.pointcast.com`) rolled out their new communications network with ads. Pointcast is also looking for people who are willing to pay something in order to turn off the ads. Humm... If this was TV, I'd look for my clicker and either channel surf or press the mute button when the ads appear. With these applications I'm not quite sure what I would do — but I'm sure there will be others who are innovative.

Like TeleVox, FreeTel uses a server-based model. Although direct IP calling may be added to all VON telephony products, the server model will continue, as it provides a nice way of finding out who is available at the moment you are looking for somebody to speak with.

Like TeleVox, FreeTel supports both file transfer and text chat mode. The file transfer feature is useful, but I've yet to find a real need for the text chat mode. The only thing which comes to mind are situations when you have a very high packet loss — but chances are that if that is the case the connection isn't going to last very long anyway.

FreeTel also pushes the minimum system requirements upward. Although the product will run on a 486/66 with a 16-bit sound card and a 14.4 Kbps connection, it is recommended that you run FreeTel on a Pentium class machine with a 16-bit sound card and a 28.8 Kbps connection.

Other features included with FreeTel are:

- Full-duplex operation
- Electronic Phone Directory
- Caller ID
- Phone Web Links
- Keyboard Communicator
- Booster Feature

One of the unique features of FreeTel which I like the best is the indication of whether or not the person listed is already online and available to chat. FreeTel Communications was the first company to recognize the value of having their directory server set up to maintain the state of each party connected.

FreeTel+ (the registered product) includes an "unlisted name" feature, which prevents anyone from calling you unless they know your private name. Private Group capability has been added, and of course you can turn off the ads from the Options menu.

If you would like to experiment with either of these products, please feel free to `mailto:jeff@pulver.com` and schedule a VON session with me.◆

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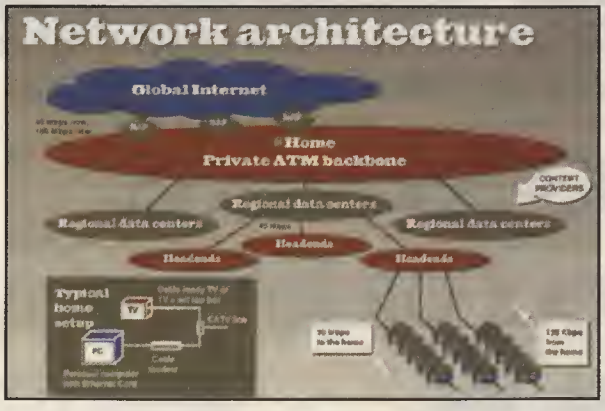
CABLE ACCESS by Neal Schnog

@Home: Solution to Internet Gridlock?

Purveyors of cable modems promise that their products will allow users to access the Internet at a speed of 10Mbps. A Disney Imagineer might tell us that instead of Goofy's car moving at 6 mph (a 14.4 dial up modem) it could now move at 4,166 mph (a 10Mbps cable modem). There are a couple of problems which could make cable modems just an "Internet Fantasy Land."

First, end-to-end data transfer rates on the Internet usually don't exceed 1.5 Mbps. So no matter how fast a cable modem itself can go, 1.5 Mbps is the top effective speed limit on the information highway; the roads just won't take any more. Secondly, and even more problematic, is the fact that the Internet is having difficulties adjusting to the current increase in demand from low-speed traffic (dial up modems). It doesn't take an Imagineer to ask how Goofy's 4,166 mph sports car will handle a road made for a 6 mph buggy, especially if traffic is crawling. So, how can the Internet possibly handle thousands of new users all demanding maximum bandwidth?

@Home claims to be the solution to these problems and the beginning of a new service that may reshape the way we look at Internet access and online services. @Home is a joint venture between Tele-Communications, Inc. (TCI), and Kleiner Perkins Caufield & Byers. TCI is the nation's largest cable television company, serving over 12.7 million U.S. subscribers in 49 states, with operations in several foreign markets. Kleiner Perkins, based in Menlo Park, California, is one of the most prominent venture capital firms in the Silicon Valley. Formed in 1972, Kleiner Perkins has provided seed money for some of the biggest high-tech successes, including Genentech, Inc., Sun Microsystems and Tandem Computers, Inc.



@Home plans to deliver more than just fast Internet access via cable. The company is currently building its own network to handle high-speed, multimedia Internet traffic.

The @Home backbone network will provide ultra-fast connections to national and international networks. Regional data centers will connect to the backbone and transport data to the cable headends, the local sites from which cable television companies exchange data with their subscribers. From the headends, data is finally delivered to homes, businesses and schools, which would transport data back to the @Home network at speeds of about 128 Kbps.

"The Internet was never designed to convey the huge amount of rich multimedia content that is being posted on the World Wide Web today," said Milo Medin, vice president of @Home. "Unlike the existing Internet, our network will be proactively managed. That means that as usage grows we can strategically add bandwidth where it is needed." In addition, since users would not often have large amounts of data to upload (usually just a few key strokes or mouse clicks), most of the bandwidth could be reserved for downloading data.

@Home is essentially planning to change Internet access as we know it. Instead of using the current entanglement of connections to enter today's World Wide Web sites, @Home's network is based on a distributed model that will connect users to multiple sources of content, including strategically selected locations for Internet access. Caching and mirroring popular content optimizes data flow on the system's backbone. This scheme will give customers access at highly increased speeds, because the information will not have to pass through the bottlenecks which are already causing Internet Gridlock.

The net result should be a new hybrid service which looks like and is part of the Internet but which can also provide proprietary multimedia services at speeds that will knock your socks off. @Home customers will use a customized version of Netscape's Internet Browser. For the regional servers, @Home will license Netscape's server software. Also, James Barksdale, President and CEO of Netscape, will join @Home's board of directors. The company also has relationships with other software developers, including Macromedia, to explore new opportunities for online video, audio, gaming and other types of programming.

Will you be able to run a Web site on a server in your living room? Maybe, though @Home's official answer is "No." @Home plans to host customers'

Neal Schnog, based in Berkeley, CA, is President of CYP, Inc., a cable television publishing and consulting firm who's primary titles are the Cable Yellow Pages and Cable Communiqué. Current projects include an online version of Cable Yellow Pages, and consulting with companies on issues ranging from marketing to technology. As a 15 year veteran of the cable television industry, he has owned and operated numerous cable systems throughout the west and continues to operate cable systems as President of Colonial Cablevision, Inc. Schnog has a variety of other investment interests extending from communications to snow board manufacturing. In his spare time he skis, mountain bikes, hikes and roots for the Syracuse University basketball team, his alma mater, where he received a BA in Economics 1981. Schnog can be reached at **mailto:schnog@cableyellowpages.com**

pages on servers at the regional data centers. But IP addresses will be assigned at the headend, so you may be able to buy a fixed IP address from your cable operator. Typical intermittent consumers will get dynamically allocated IP addresses, but we bet there will be significant demand for fixed-address, round-the-clock connections from home-based businesses. A 128 Kbps pipe is plenty wide enough for a light to medium traffic Web site and other duties.

Rumors have surfaced that @Home, under testing in Sunnyvale, CA, was forced to push back the timetable for a large-scale effort indefinitely because of technical glitches, including noise and amplification problems. Such is not the case, according to Larea Marsik, spokesperson for TCI and @Home. "More than a few but less than a lot" of "techno-savvy" households in the California Bay Area are already part of the @Home Alpha test, and so far there haven't been any problems. "The modems work and we have our noses to the grindstone," claims Marsik.

@Home's controlled roll-out is already underway. Once quality and technical standards are met, @Home will move into Beta testing. "We still plan to introduce the product widely to consumers by mid-1996," Marsik said. Possible early markets are Fremont, California; Seattle, Washinton; Baltimore, Maryland and Boulder, Colorado. "Because there has been such a great deal of interest, we're working hard at a steady pace toward launch," added Marsik.

One report said that @Home needed extra time to build the increased network capacity to the service's backbone to support the higher-than-expected customer demand. Marsik says that network capacity is right where it should be and that customer "excitement" has been a driving force.

@Home has moved forward remarkably fast, even by frenetic cyberspace standards. The venture was founded in May of 1995. In November, the company unveiled its first demonstration of @Home and now, only a year after start up, is just moments away from a commercial launch.

End user demand does not ensure success. The future of @Home depends upon its acceptance by U.S. cable operators, many of whom would have to upgrade their systems to provide the new service. In addition, the quality of @Home service will be significantly affected by a cable operator's ability to maintain service. Most cable customers are all too familiar with cable outages.

Currently, @Home officials are being tight-lipped about when the commercial launch will actually occur. TCI's customer service representatives, however, say that the service will be available in selected areas "soon." They also confirmed that questions about @Home's availability are common. This indicates consumer demand for the service — or a lot of phone calls from curious journalists. Either way, @Home's launch is sure to be greeted with great interest. ◆

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Chrysler Recall Forced by Internet Users

by David Hakala

Charlene Blake of Springfield, Virginia, started having problems with the brakes of her 1992 Dodge Caravan when it was only a year old. "I'd push the brake pedal to stop, and it would stay depressed, and my brake lights would stay on," she recalled in an interview with Frances Cerra Whittelsey of ***SHOP! Information Services*** (**http://www.sis.org/docs/chrysler.html**). Her dealer installed a return spring under the brake pedal, but told Blake nothing else was wrong. "Then, during Christmas week of 1994," said Blake, "...I had to floor the pedal with both feet to stop. At that point we stopped driving it."

The dealer told Blake it would cost $2,100 to repair the brakes; the car was just out of warranty and had 33,000 miles on it. The car had 14,000 miles logged when Blake first complained about the brakes. Blake was outraged, and wondered if other Chrysler minivan owners had similar brake problems. She began putting fliers on minivan windshields. Then, at a friend's suggestion, she posted a message in the **rec.auto.makers.chrysler** newsgroup about her problems.

"Up to that point, it was like a super-sleuth thing trying to find people who had the same problem, but then it just snowballed," she said in the SIS interview. "I had about 60 people tell me about remarkably similar problems." A pattern emerged of brake failures and denials of defects by Chrysler and its dealers.

Brian Gluckman, owner of a 1992 Eagle Summit, has a Web site devoted to Chrysler ABS Brake Problems at **http://www.glue.umd.edu/~kaustin/Chrysler.html**. There you can read horror stories like this one from AOL member JGreen4173:

"We have complained about the ABS brakes for sometime and the 2 or 3 dealers we took it to told us we were crazy. Until about 2 months ago when the brakes totally failed and my wife almost got into an accident that the dealer finally admitted that there is an ABS problem. They had the car for 3 weeks because there were no parts available. When we got the car back the ABS would still not engage and a neighborhood mechanic could not find any repairs were made consistent with what the dealer told us was a complete replacement of the ABS system."

Attorney D. Brian Hufford read Blake's e-mail address in a newspaper article. Hufford joined the Internet fact-finding effort, and ultimately filed a class action lawsuit on behalf of the 100 car owners who met on the Internet.

On April 16, 1996, Chrysler finally announced a safety recall of about 300,000 1990 to 1993 cars and minivans equipped with Bendix-9 and Bendix-10 Antilock Braking Systems (ABS). The lawsuit continues because, says Hufford, "there are still fraud allegations" claiming that Chrysler long knew of the defects and attempted to cover them up.

Hufford says the Internet is "an incredibly useful tool" for tracing the extent of product liability problems. Susan Robins of Van Nuys, California, another ABS victim, calls the Internet "the best tool for consumer action to come along in recorded history."◆

EDUCATION LINK

by Rea Andrew Redd

INDEPENDENT LEARNERS

Seventeen students from a class of 157 were sent off to the computer lab at Brown University; would they learn organic chemistry faster, easier and be more motivated than the 140 who sat in a lecture hall? Chemistry professor Jim Doll and other Brown faculty created a program in which nearly all materials in an organic chemistry course were available to students using Internet tools such as the World Wide Web. Working since 1993 on supplemental material for the course, Doll molded the material until it took the form of a self-paced class.

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: redd@genesis.duq.edu

Previous efforts to introduce computers into the chemistry classroom were disappointments; the difficulty lay in teaching students how to use the hardware and software. By the summer of 1995, with the aid of the World Wide Web, Doll had reworked this older material. The fall 1995 organic chemistry class was the first to become an experiment in and of itself.

Studying from self-paced, computerized tutorials, reading from the text book, attending labs and discussion groups, and communicating with the faculty through e-mail replaced the traditional classroom environment of lecture, labs, and discussions.

Several of the self-paced students' test grades climbed dramatically; several of these students test grades plunged. As the groups were compared at the end of the semester, the percentages of A, B, C, D, and F grades were the same in each group.

Although Doll and others were hesitant to generalize from the experiment, which was financed with $200,000 from the Alfred P. Sloan Foundation, it appears that all learning styles are not compatible with independent, self-paced, Internet-based education. Something has to go on before the student is turned loose as an independent learner.

Practical-minded and experienced professionals may readily put together a course, labeled "Independent Learning 101," in which the student explores learning styles and realizes for which ones they are best suited. Add a component of critical thinking skills and add Web research exercises. Voila! Some students, but not all, are prepared for a self-pacing, Web-based, directed study course. Now, for those of you that take this idea and get a doctorate, please give Education Link a citation in your dissertation!

ENGLISH AS A SECOND LANGUAGE; HTML AS A FIRST

Instructors of English as a second language have a friend at the City University of New York (CUNY); an Internet gopher for Teaching English as a Second or Foreign Language (TES/FL) is up and running on CUNY's main frame. Journals such as English Teaching Forum, a directory of binational centers and institutes, conference announcements are located on the CUNY TES/FL gopher. Over 4,000 teachers in 73 nations are members of the TESLA listserv; phone Jay Hershenon at **(212)749-5317** or Rita Rodin **(212)794-5685** to receive the necessary information to take advantage of this Internet resource.

THE ELECTRONIC REFERENCE LIBRARIAN

The University of California at Berkeley offers access to a monthly bibliography of selected articles, books and electronic documents on information technology, electronic publishing, networks and optical disk technology. "CurrentCites" can be found at **http://sunsite.berkeley.edu/CurrentCites**. More resources on technology and education are located at the University of North Carolina at Chapel Hill's Web page, **http://www.iat.unc.edu**. An electronic library of bibliographies, CD-ROMS, journals, newsletters, workshops, training sessions, all of which are related to technology in the classroom can be found here.

If you are looking for cancer research, then try "Medinfo" at **http://www.medinfo.org** to search the archives of discussion lists, which contain over 45,000 records. Harvard University has brought online the W. E. B. DuBois Institute for Afro-American Research; **http://web-dubois.fas.harvard.edu** has the institute's conference papers, lectures, publications and research. The Encyclopedia Africana, The Harvard Guide to African American History and The Black Periodical Literature Project archives are also at this site.

The Internet Compendium Guides to Resources by Subject provides Uniform Resource Locators for more than 10,000 Internet sites in hundreds of categories. Chapters in this three-volume set include subject guides to humanities, health and science, social science, business, and law resources. Call Neal-Schuman Publishers at **(212)925-8650** or write them at 100 Varick Street, NYC, NY 10013 to request more information on this **$175** reference item. Less expensive at **$50** and also from Neal-Schuman Publishers is ***The Internet Companion for Librarians*** that offers basic information on connecting, hardware and software specifications, e-mail, FTP, the Web, global networking for libraries, and resources/services for librarians.

Reference & Collection Development on the Internet: A How-To-Do-It Manual for Librarians

lives up to its name and is a decent value at **$40**; it's also from Neal-Schuman Publishers. If your budget is a little smaller, then look closely at the American Library Association's (ALA) ***The Internet Initiative: Libraries Providing Internet Services and How They Plan, Pay, and Manage***. For about **$25**, this book is well worth every cent. Like most ALA publications, there is very little extraneous material and you'll probably find something useful on every page. Call the ALA, **(800)545-2433** or write to them at 155 North Wacker Drive, Chicago, IL 60606-1719.

SilverPlatter, one of the premier electronic searching services, has established a Web page. The company's 200+ products are amply described, issues related to the information industry, and a monthly feature that presents a topic and how it can be researched electronically. Any reference librarian will be entertained and educated by browsing **http://www.silverplatter.com**.

For reference librarians in special and public libraries, which regularly field queries from entrepreneurs, an electronic shortcut is at hand. Firstmark, Inc. has opened its database to Web users at **http://www.firstmark.com**. Information on millions of U. S. and international medical, technology, and general businesses can be perused and ordered from the Firstmark catalog. Databases and mailing lists used in sales, telemarketing, direct marketing, and market research are available through geographic region, number of employees, revenues, product and other categories. Phone Firstmark, Inc. **(800)729-2600** or **mailto:fmk@firstmark.com**.

The Center for Research Libraries now has a Web site at **http://wwwcrl.uchichago.edu** offering staff directory information, member lists and descriptions of their collections and services. If you need a voice then call Linda Naru, CRL Director of Member Services **(312)955-4545**, ext. 318.

LAW AND BUSINESS LIBRARIAN

Lexis-Nexis, the online legal and business information provider, with the cooperation of American Lawyer Media, a legal journalism company, has free software that allows full access to the Internet and links to thousands of lawyers using e-mail and electronic seminars. Send e-mail to Lloyd Trufelman of Trylon Communications, Inc. (**mailto:ltrufelm@counsel.com**) or John Hourigan of Lexis-Nexis,

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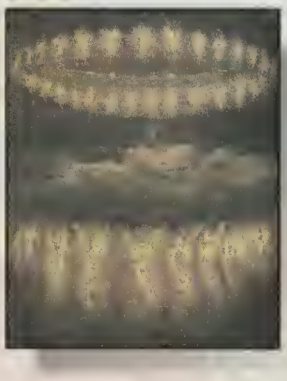
In yet another partnership, Lexis-Nexis and Open Market, Inc. are making available the Lexis-Nexis Small Business Advisor on the Internet. Designed for small business owners and home-based businesses, the Small Business Advisor has an archive of 5,000+ articles that are updated daily. News groups and pertinent forums are linked at this site. It's a free service for browsers, who may search by keyword and view an abstract. An entire article can be purchased for about **$2.00** and then viewed and downloaded or printed. Steve Edwards at Lexis-Nexis is the contact; phone him at **(513)865-1059** or send **mailto:stevee@lexis-nexis.com**

THE COLLEGIATE BROWSER

Digital 'Inferno'



Columbia University and Dartmouth College have online Dante Alighieri's Divine Comedy, which consists of three poems, and modern criticisms and commentaries. Columbia's Institute for Learning Technologies (CILT) is an experiment that aims to use the Internet and WWW to combine a literary text with images and criticisms. The CILT's Web site offers the 700 year old text in Italian and its English translation by Henry Wordsworth Longfellow. Inferno, Purgatorio, and Paradiso, the three poems, have annotations and illustrations. See **http://daemon.ilt.columbia.edu/projects/dante/commedia/frontispiece.html**. For an even more scholarly approach visit Dartmouth College's Dante Project with its over 45 searchable line-by-line commentaries of the Divine Inferno with some having been written over 600 years ago at **gopher://gopher.dartmouth.EDU:70/1/ftp/pub/Dante**.

On Death and Dying

From Billboard Magazine's Top 20 Hit List to a consumer's guide to funeral

planning, Trinity University in Texas has put online its "Sociology of Death and Dying" course taught by Michael Kearl.

The course has a heavy emphasis on Internet resource researching by students. The WWW is used to find materials for student multimedia presentations on a wide range of topics ranging from ghosts and psychic networks to the death penalty and a world directory on euthanasia. Kearl has the luxury of an electronic classroom with a computer linked to the Internet, audio and video recorders and players, film and slide projectors with a 12x12 foot screen, a laserdisk player and satellite television. **http://www.trinity.edu/~mkearl/death.html** is the Web address for the "Sociology of Death and Dying" course.

Academic Career Advise

The electronic version of the federal government's ***Occupational Outlook Handbook*** and Griffith University's ***How to Succeed as a Student*** are now linked online through the University of Texas (UT) at Austin. The site features links to college catalogs, academic guides, testing services, financial aid, and study abroad. Initiated by a UT librarian for the National Academic Advising Association's regional workshop, this site also contains the Academic Advising forum mailing list that allows academic advisers to trade notices and information easily. The name of this adviser's list is "ACADV" and subscribers should send a message to**mailto:listserv@vml.nodak.edu**. The text of the message should say **subscribe acadv <your name>**. The address for the UT at Austin's WWW career and academic advising site is **http://volvo.gslis.utexas.edu:80/~acadres**.

The National Association of Graduate and Professional Students (NAGPS) offers a job bulletin board and career development information at **http://nagps.va.research.com/NAGPS/nagps~ht.html**. Members of the NAGPS can browse the association's Web site and its links to commercial placement services and university career centers. Graduate students who are enrolled at universities in the U. S. can request the password by sending **mailto:nagps@netcom.com**.

Maricopa County Community College has developed a guide to WWW sites maintained by other community colleges. More than 360 colleges in the U. S., Canada and Europe offer Web sites that run the gamut of the most basic information concerning campus administration to online access to library catalogs and course registration. Information on pointers and standards established by the Community College Leadership Program and the League for Innovation in the Community College at the UT at Austin. **http://www.mcli.dist.maricopa.edu/cc** is the address for these associations.

Master's Degree Through the Internet

Walden University of Minneapolis, Minnesota, offers master's and doctorates tailored for mid-career professionals through the Internet. From the student's own location and at their own pace, the degree candidate uses the Net for e-mail, library resources, online seminars to complete their program, generally within three years. Doctorates in Education, Health Services, Human Services, Administration/Management and Masters in Educational Change, Technology and Innovation are available; more info is available from **mailto:request@waldenu.edu** or **http://www.waldenu.edu**; you may wish to call **(800)444-6795**.

'Show Me' Political News

The University of Missouri at Columbia offers "Missouri Digital News" at **http://www.missouri.edu/~jschool/xgr/mdnhome.html** which is an electronic news and information service on the state's government. Retrieval of legislation pending in the General Assembly, rosters of the House of Representatives and Senate committees, voting records and budget recommendations is possible at this site. The United States House of Representatives' Committee on Economic and Educational Opportunities has its own Web page. Student-aid issues, the Balanced Budget

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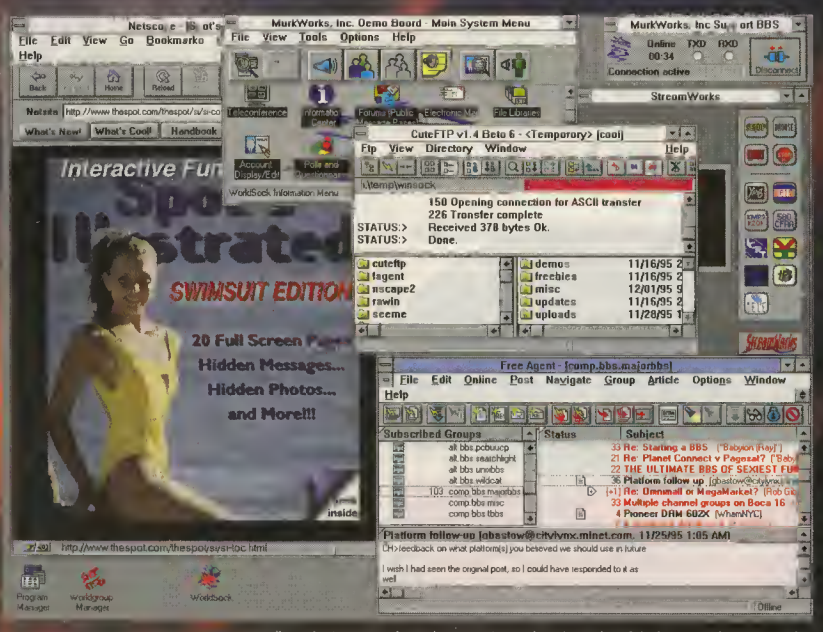

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Act of 1995's impact on education and student loans, as well as pending committee business can be found at **http://www.house.gov/eeo**.

College Teaching

Miami University of Ohio has online The Journal of Excellence in College Teaching; **http://www.lib.muohio.edu/ject/** is the Web site address. Also for the classroom teacher is "OCC-L" which is the Online College Classroom mailing list; focusing upon the methods of teaching college classes online, this mailing list's topics run the gamut from planning and methods of instruction to the philosophies and theories of pedagogy and electronics. The list is at **mailto:listproc@hawaii.edu**. A moderated discussion list, "infolist," for educators interested in computers, education and the Internet is located at **mailto:majordomo@gsn.org**. Online educators, looking for kindred spirits, should browse the Annenberg/CPB Project's Web site devoted to online courses, distance-learning resources, guidelines for grant programs, multimedia catalogs, and pertinent research reports; **http://www.learner.org** is well worth the visit.

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Citizens with Disabilities, Sports

An electronic magazine, ***Mainstream Online***, features current information, articles, product announcements, profiles of advocates, legal and courtesy issues such as handicapped parking, sexuality, personal relationships, and employment. Send your students to **http://www.mainstream-mag.com/** to examine a slice of American life with which they may not be familiar.

The list "sportscience" offers research on exercise performance, ergogenic aids, physical tests, nutrition, diet, and weight training; **mailto:listproc@stonebow.otago.ac.nz** is the site.

Writer's Workshops

"Bloodquill" is a mailing list for writers willing to share their works in progress; poetry, screenplays, and nonfiction are available for comments; **mailto:majordomo@pobox.com** offers a subscription when you send **SUBSCRIBE bloodquill <your name>**.

'Time and Money' Department

If you have time and money, you should try to attend the Conference on Information Technology, November 13-16 this year in Phoenix, Arizona. Computer access and the at-risk student, the application of technology to teaching and learning, managing technological change, development and production of curriculum, model programs, partnerships, and networking are all on the agenda. Rio Salado Community College, the Maricopa Community Colleges, and the League for Innovation and nearly 40 corporations are the hosts and sponsors. The League receives fatmail (26522 La Alameda, Suite 370, Mission Viejo, CA 92691), phone calls **(714)367-2884**, faxes **(714)367-2885** and e-mail via the Web (**http://www.league.org**).◆

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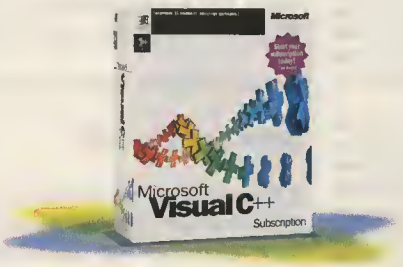

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MANNING THE WIRES

by Ric Manning

THREE STEPS TO INTERNET BUSINESS SUCCESS

The folks at the Harvard Business School probably wouldn't phrase it quite this way, but the key to business success on the Internet seems to boil down to three main elements:

1) Come up with a cool way to present your product.
2) Figure out how to charge your customers.
3) Cash in with a public stock offering.

Isn't that how the people at Netscape played the game? First they drew attention to their Web browser by giving it away, then they started charging for the latest version. Along the way they took the company public and turned all the employees into millionaires.

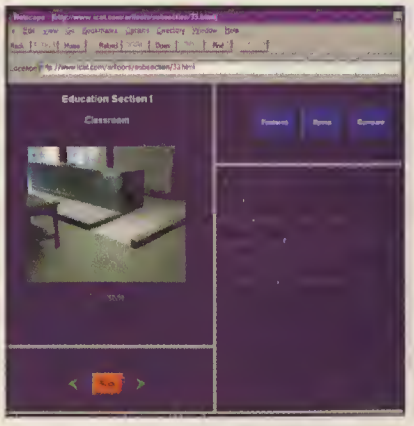
Some pundits predict that corporate use of the Web as a sales channel will increase more than 600 percent this year, to a volume of $260 million. To get a piece of the action, Internet entrepreneurs are following the same three-step pattern, or hoping to make their own fortune by helping others do business online.

Consider these recent examples:

STRUT YOUR STUFF

Thousands of companies make their living selling products through printed catalogs. The trick in the Digital Age is translating the material in the printed catalog into an electronic version.

A Seattle company called ***iCat Corp.*** — **http://www.icat.com** — says it has the answer. iCat says its new iCat Commerce Suite software offers a painless transition from ink to electrons. iCat president Craig Danuloff compares iCat's software to Adobe's PageMill and Vermeer's FrontPage, two programs that simplify Web page creation.



iCat-created Catalog Page From Arctitectural Floor Systems Inc.

iCat's Electronic Commerce Suite includes a database that can accommodate any number of products, custom product search capabilities, a collection of more than 100 catalog templates and transaction processing capabilities that include secure credit card processing.

"We've developed a straightforward method that frees people from having to integrate lots of software," said Danuloff. "All they need to do is enter or import product information, select one of our pre-designed templates and place it on any Internet server."

iCat clients include major league catalog marketers such as Office Depot and Amway as well as small outfits like Architectural Floor Systems Inc. and the Edutainment Co., a Colorado-based distributor of children's and family software. In April, New York gourmet merchant Dean & DeLuca launched an online catalog to complement its 25 gift boutiques on the East Coast.

iCat has also developed partnerships with the Catalog Site, a Web-publishing company that helps companies put catalogs online, and CheckFree Corp., the electronic payment processor.

The Electronic Commerce Suite costs about **$1,500** and is available for Internet servers running on SGI, Sun, Windows NT, and Macintosh.

COLLECT THE CASH

Credit card sales are fine for many catalog companies and other Internet marketers, but publishers have been waiting for something a little less complicated. They want a system that will ring the cash register with every mouse click.

Clickshare — **http://www.clickshare.com** — is a new technology developed by Newshare Corp. of Williamstown, Mass. The system lets Web surfers sign up for a "digital calling card" that allows them to charge online purchases to a single account.

Two Net-based publishers began using Clickshare in March. ***Studio Briefing*** is a daily report featuring news from the entertainment industry and ***American Reporter*** is a writer-owned daily news report aimed at individuals and small publishers.

Here's how Clickshare works: users register their credit card at a Clickshare-equipped site that becomes their home site. They can then use another Clickshare site during a session without being prompted for an ID or password.

Studio Briefing and ***American Reporter*** charge a monthly subscription fee, but Clickshare CEO Bill Densmore has his eye on smaller "microtransactions"

Ric Manning writes about business technology, computers and consumer electronics for ***The Courier-Journal*** in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web **http://iglou.com/gizweb**

Ric was the founding editor of ***Plumb*** and ***Bulletin Board Systems***, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including ***PC/Computing***, ***Mobile Office***, ***PC Week*** and ***Home Office Computing***. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at **mailto:ricman@iglou.com**

in which publishers will be selling each other's information for perhaps a dime a click.

Say, for example, that a Web publisher creates a site devoted to the Chicago Cubs. The publisher might link to news stories from the Chicago newspapers, player profiles created by sports magazines, statistical data from ***The Sporting News*** and other material created by the team or its fans. Each time a customer used a link to read or capture information from a remote source, another 10 cents would be billed to his or her account.

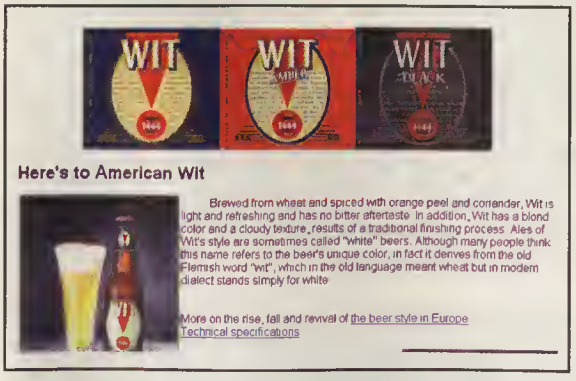
Clickshare would pocket a percentage of the fee. The users would get a single bill from a single source and the information providers would get a detailed report on what pages (and advertisements) were served up to the subscriber's screen.

Densmore hopes Clickshare will be popular with publishers because it will be an easy way to get paid for their work. And he said users will like the concept because they will no longer have to re-register and get new passwords for every pay-to-view site.

GO PUBLIC

When ***Spring Street Brewing Co.*** wanted to raise money last year for expansion and product development, the New York-based microbrewer decided to offer stock to the public.

But Spring Street — **http://plaza.interport.net/witbeer/** — didn't turn to Wall Street to sell its shares. Instead, it set up shop on the Infobahn. The company's stock was registered in 22 states, but investors who wanted to review the company's prospectus could look it up on the Web.



Spring Street Brewing's Web Site

The sale went well and Spring Street raised ***$1.6 million***. Spring Street's shares aren't listed on a regular stock exchange, which makes them difficult to sell. But CEO Andrew D. Klein, a former securities lawyer, thought he had found a way around that problem.

In March, Spring Street created a pair of bulletin boards on its Web site that let buyers and sellers find each other. Called Wit-Trade, named after the brewery's Wit brand beer, the system lets buyers post the prices they want to pay for Spring Street stock and sellers post their asking prices. Buyers and Sellers used e-mail to contact one another. The actual trades took place through the mail.

Everybody was happy for a couple of days, but then the Securities and Exchange Commission started asking questions. A lot of questions. On March 21, Spring Street suspended trading.

Klein said he believed Wit-Trade complied with securities laws because small companies are allowed to match buyers and sellers and act as their own "transfer agents." But the SEC said trading over the Internet made Wit-Trade a far more public endeavor.

At press time, the SEC has given Spring Street tentative permission to resume trading its stock over the Internet. In a press release, Spring Street said the SEC asked for some modifications in the trading scheme and the company planned to comply.

Spring Street said it will use an independent agent, such as a bank or escrow agent, to receive checks from buyers of the securities. The company also said it will publish a complete transaction history showing the price and number of shares for each recent transaction and allow the SEC to review much of its financial information.

Klein said he expects the Internet to become an active arena for trading in small company stock. "As a way of reaching out to people, the Internet is a big breakthrough for small businesses," he said. "They want to know how they can take a public offering onto the Internet and avoid going to venture capitalists."

In fact, Spring Street plans to open an all-Net stock exchange for IPOs – the Initial Public Offerings so popular today. Traditional exchanges such as NASDAQ are not happy, but cutting out traditional middlemen seems to be the way the Net is weaving.◆

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MACINTOSH NEWS

by Bill Gram-Reefer

LAST BUT NOT LEAST

Aladdin Systems has begun shipping StuffIt Deluxe 4.0, a major upgrade to the company's award-winning flagship product. There are some significant improvements here and some interesting thinking.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. His Online Services column appears monthly in *MicroTimes*. His amateurish web page can be accessed at **http://worldview-bbs.com.** E-mail Bill at **reefer@worldview-bbs.com**

The new StuffIt Deluxe employs a True Finder Integration (TFI) control panel which acts as a central location where users can configure all Aladdin technologies integrated into the Finder. The TFI control panel features an extensible architecture including three TFI "extensions:" StuffIt Browser, Magic Menu, and Archive Via Rename.

StuffIt browser is interesting as you can use it to create, examine and modify archives without leaving the Finder. Double-clicking an archive instantly shows all of the contents of that archive as if it were just another folder. It eliminates the frustration of having to wait for the full application to launch just to see or manipulate one file you've salted away. Users can simply drag files from an open archive onto the desktop. Conversely, a file can be Stuffed into a StuffIt archive by dragging it onto an open archive window. This function works under System 7 Pro (7.1.1) and higher.

StuffIt's Magic Menu, a Finder menu of compression options, has been improved in 4.0. Now it supports more Internet archiving and encoding file formats including "tar" and segmented and multi-part UUencoded and BinHex files. Besides expanding compressed files, Magic Menu can Stuff files and join files segmented with a StuffIt product. Users of Qualcomm's Eudora, QuickMail and Microsoft Mail can easily send mail using Magic Menu's "Stuff and Mail" feature. When using Eudora, for example, you can select an item in the Finder and choose "Stuff and Mail" from Magic Menu; the file or folder is Stuffed into an archive and attached to a newly-created e-mail message.

Another finder integration feature which makes compression and expansion easier is Archive Via Rename. A user can simply add ".sit" or ".sea" to a file or folder name and it will instantly be converted into a StuffIt archive or self-extracting archive. Conversely, by deleting the .sit or .sea from a file name, the file or folder will automatically expand. This feature has appeared in previous versions of StuffIt Deluxe, but it can now be configured from the True Finder Integration control panel.

By the way, StuffIt Deluxe 4.0 is 20% faster on Power Macs than previous versions. According to the company, the expansion of many file formats is up to 50% faster, including StuffIt, BinHex, ZIP, and others.

SpaceSaver, Aladdin's transparent compression component, now features a new "tag icon" feature. A user can configure SpaceSaver to superimpose a small "tag" on file icons which have been compressed with SpaceSaver. This allows users to quickly discern which files on their disk have been SpaceSaver-compressed.

StuffIt SpaceSaver's transparent compression gives users an easy way to free disk space. When a file that has been compressed with SpaceSaver is opened, it will automatically expand, and when the file is closed it will be automatically recompressed. Files may be SpaceSaver-compressed on-command by applying a user-defined label or keyword to files. A user may also choose to have SpaceSaver work during Idle Time when SpaceSaver seeks files which have not been modified for a user-defined period of time, and compresses those files while the computer is idle to increase users' free disk space over time.

New and improved drag and drop applications (or "drop boxes") are included with StuffIt Deluxe 4.0. To use a drop box, a user just selects a file or folder and drags it over to the appropriate drop box. I really like the one-step ease-of-use that the drag and drop applications provide. In fact, I'd bet these are the most frequently used features of the entire StuffIt ensemble. DropSegment, which allows users to segment files and StuffIt archives using a drag and drop interface also comes with 4.0 . This feature allows users to fit a large archive on multiple floppy disks which can be restored from the floppies at any time. DropSegment can optionally create multi-disk self-extracting archives which anyone can UnStuff, even if they do not own a StuffIt product.

My favorite, DropStuff, creates StuffIt archives, self-extracting archives and can optionally BinHex-encode archives for distribution over the Internet. DropCompress, another drop box included in 4.0 lets users quickly SpaceSaver-compress files for saving disk space.

StuffIt Deluxe 4.0 is commercial software distributed worldwide and is available through major mail order

houses and retail stores for a suggested retail price of **$129.95**. Aladdin is extending a special upgrade offer to registered users of Aladdin products for **$29.95** (offer good directly through Aladdin until July 1, 1996).

Aladdin Systems, Inc., 165 Westridge Drive Watsonville, CA 95076 USA; **(408) 761-6200** voice; **(408) 761-6206** fax; **http://www.aladdinsys.com** or **mailto:cust.service@aladdinsys.com**

AND IN THE END

A publication such as ***Boardwatch*** has important things to do in its pages; some are more legitimate than others. Knowing about only 1% of its readership claims the Macintosh platform, the powers that be have decided to put the kibosh on this Mac column, which has appeared in these pages every month since mid 1993. Since then I believe I have fulfilled my personal goal of being at least a fair and competent cheerleader for the Mac platform in a publication otherwise wholly given over to the dominant market trends.

[Editor's Note: Bill will continue to appear in our pages, covering the rapidly changing scene of telecomm deregulation, cross-industry competition, mergers, startups and other cataclysms.]

It's been fun and so have you, especially those of you who bothered to e-mail me with questions, criticisms, and a few raves here and there.

Despite this transition, I still believe ***Boardwatch*** to be a great value to anyone on any platform that wants to keep up on the exciting progress taking place in the arena of bulletin boards, Internet, and PC-based telecommunications in general. I read it cover-to-cover every month and not just to see how badly my prose turned out 2 months down the road.

As the Beatles once meant to say, the URLs you give is equal to the URLs you get in return. A form of cyberly love for one's neighbor, I suppose. So in the absence of continuing dedicated coverage of Apple Computer and third-party products within these august pages, here are some Mac-based areas online that are of great value to me and I pass them along to get you as some of the best ways to keep up on doings involving the Mac's very important and growing place in the online world. I had to crib from somewhere <g>. Enjoy!◆

RESOURCES FOR MAC USERS

MacInTouch
http://204.107.232.226

Edited and maintained by Ric Ford, this web page is worth checking daily to keep up on Mac news, product announcements and updates, progress of beta software and new shareware releases, bug rumors, and some fixes.

MacWeek Online
http://www.zdnet.com/~macweek

After ***PC Magazine***, this web page is the second-most active page within the Ziff-Davis sponsored home page featuring access to all of its titles. If you can't afford to subscribe to the analog version, then this is the place to check weekly. Many stories appear here earlier than in the printed version as well as many exclusive stories that never make it into print. Luckily, even The Knife appears online.

MacWorld Daily News
http://www.macworld.com/exclusives/dailynews.html

MacWorld staffers Matthew Hawn, Cameron Crotty, and Suzanne Stefanic, among other IDG notables, put a lot into getting important Mac and general computer industry news into a neat, utterly usable format for quick scanning with hot-link access to full-text articles.

MacUser Downloads
http://www.zdnet.com/macuser/downloadables.html

An excellent collection of reviewed and rated shareware, some of it commissioned by ***MacUser*** as the monthly utility the publication offers its readers.

Info-Mac HyperArchive
http://hyperarchive.lcs.mit.edu/HyperArchive.html

This is an Info-Mac archive mirror designed specifically for access via a web browser. Quick and painless access to the entire universe of Macintosh shareware downloads and updates for commercial software.

EvangeList
mailto:evangelist@macway.com

Over 25,000 Macintosh enthusiasts have subscribed to the EvangeList, a brainchild of Apple Fellow, guerrilla marketing guru, and stealth Presidential candidate Guy Kawasaki. Available from Apple's unofficial listserver, subscribing to the EvangeList will supply you with an endless stream of good news about Apple, Macintosh, and third-party developers. To subscribe to EvangeList, send **mail to:evangelist@macway.com**. You'll probably want to set your subscription method to "digest mode."

The Well Connected Mac
http://www.macfaq.com

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PUTTING THE NET TO WORK

by Durant Imboden

VACATIONING ON THE WEB

With summer fast approaching, I asked David Hakala, my editor at Boardwatch, about scheduling a vacation. David pointed out that freelance writers don't normally get paid vacations at any magazine.

Fortunately, there was an easy solution. David appointed me Contributing Travel Editor for ***Boardwatch*** and gave me a press card that read:

"This Official Press Document authorizes travel suppliers to award the bearer complimentary airline tickets, cruises, hotel rooms, restaurant meals, alcoholic beverages, car rentals, travel-related merchandise, reimbursement of personal expenses, and other professional courtesies traditionally extended to travel writers in return for unbiased coverage of the donors' goods and services."

Talk about perks! To demonstrate my generosity, I quickly appointed my wife Assistant Contributing Travel Editor and ran off a copy of the press card with the help of my Hewlett-Packard ScanJet 3c and Laserjet 4M Plus. (That's called "product placement," folks.) Finally the missus and I were ready to begin planning our summer vacation on the World Wide Web.

Our first step was to pick a destination. We quickly settled on Europe, since (1) we're people of culture who thrive on the great artworks and architectural masterpieces of Western civilization, and (2) having lived in the tropics, we like places where you don't have to dodge poisonous creatures or boil water before brushing your teeth.

We then fired up our trusty PC (a homebuilt clone — no product placement there!) and began our travel search at ***TravNet! International***, **http://www.comdinet.com/comdinet.htm**.

TravNet! bills itself as "a full-featured Travel and Tourism pro-active world-wide marketing SYSTEM." (Caps theirs, not mine.) Its centerpiece is the GPS-96 Intelligent Itinerary Planner, which ultimately will let travelers plan and download customized itineraries with listings of hotels, restaurants, and attractions along the way.

Unfortunately, most of the system is under construction—much like a new resort that offers half-finished accommodations to the unsuspecting tourist. So, with reluctance, my wife and I bade farewell to TravNet! and headed for ***Lonely Planet*** at **http://www.lonelyplanet.com**.

Lonely Planet is an Australian publisher of first-rate guidebooks for budget travelers, and its Web site offers useful country and city descriptions, maps, photos, and "on-the-road postcard" travel reports via menus and a search form. It's a nice stopping-off place on your way to the more practical ***Round-the-World Travel Guide*** at **http://www.digimark.net/rec-travel/rtw/html**.

Headings like "[3.4] Railroads" and a bare-bones interface suggest that the Round-the-World Travel Guide must have been designed by an engineer or tech writer. Still, it's packed with helpful advice and links to other travel sites. My wife and I used it to reach the ***Eaasy Sabre***, ***OAG***, and other online airline information FAQ at **http://www.cis.ohio-state.edu/hypertext/faq/usenet/travel/air/online-info/faq.html**. This document pointed us to **http://www.itn.net/cgi/get?itn/index**, home of the ***Internet Travel Network***.

The Internet Travel Network is "the world's only Internet service that lets you book your travel arrangements through an agency near you." Since we live in Minnesota, we ignored the travel-agent listings for Brazil, Russia, Turkey, and other exotic places. Instead, we signed up with Dolores Parkhill's Five Star Travel in downtown Minneapolis. (This is just one of several dozen agencies in the Twin Cities area, which speaks well for ITN's marketing efforts.)

We then entered an itinerary, using ITN's detailed if somewhat confusing e-form. The system responded with several flight choices, giving us a price quote after we selected from the list. The e-form even had a "meal request" list box and a place to enter other notes and special requests.

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network. His credentials include published novels, articles, and short stories; fiction editing and staff writing for ***Playboy***; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. **Mailto: Durant_Imboden_MSN** on The Microsoft Network or **writing@msn.com** on the Internet. The author is not an employee or spokesman for Microsoft.

We'd already decided to hitch a free ride to London on Northwest Airlines with our ***Boardwatch*** press pass, so we jotted down the flight times and deleted the itinerary that we'd created for our local travel agency. (Sorry, Dorothy!) Next, we searched the Web for information on the United Kingdom. Our first British stop was ***Dave Gates's Travel in the U.K.*** at **http://www.neosoft.com/cgi-bin/htmlscript?~dlgates/uk/uk_general.hts+uk/uktravel.dat**.

Dave's Travel in the U.K.site is most notable for its lists of public houses and B&Bs — a sensible combination for travelers who'd like to drink their away around Britain, sleeping it off at minimum expense between pub visits.

The site also includes Web links to cities, towns and villages throughout Britain, including such handy sites as ***The Pocket Guide to Oxford***, **http://www.ip7.co.uk/pg/oxford/index.htm**, and ***London: An Alternative Guide*** at **http://ourworld.compuserve.com/homepages/Great_Northern_Diver**. The latter includes a link to my own favorite UK travel page, ***How to Get Around on the London Underground***, **http://personal.quipu.com/~zzyzx/tourist/tube.html**. ***The London Guide***, at **http://www.cs.ucl.ac.uk/misc/uk/london.html**, is another vital stopping-off place for the UK-bound traveler.

"Excuse me," my wife said as I was planning an underground trip from Pimlico to Blackfriars. "But speaking of transport, how do we reach the Continent from England?"

Her verbal cue couldn't have come at a better time. I was already typing **http://rail.rz.uni-karlsruhe.de/rail** to access ***The RailServer's*** collection of European railway links. While there, I entered an e-mail database query about trains from London to Paris, the next stop on our vacation itinerary.

I also visited ***FranceScape*** at **http://www.france.com/francescape**. The site was disappointingly sparse, considering that it was co-sponsored by the French Government Tourist Office, so I bailed out and tried ***City.Net's*** France page, **http://www.city.net/countries/france**. Clicking on "Paris" led me to a cornucopia of lively links, ranging from ***The Paris Pages*** at **http://www.paris.org** to Reinhard Schaffner's comprehensive ***Disneyland Paris*** site at **http://www.informatik.tu-muenchen.de/cgi-bin/nph-gateway/hphalle1/~schaffnr/etc/disney**. The ***Webfoot's Guide to Paris***, **http://www.webfoot.com/travel/guides/france**, proved to be an even more valuable resource, needing only a list of laundromats to be complete.

It was time to bid adieu to France and visit the ***Bernese Oberland*** of Switzerland, where my ancestors once yodeled and made music on cowbells. Bern's Web page, **http://www.vptt.ch/bern-page.html**, is enhanced with goodies that include an MPEG aerial tour of the city and traditional Swiss music by Aaretaler Husmusic.

Zurich is a favorite stop on any Imboden tour of Switzerland, so I opened Zurich News & Info at **http://www.zurich.ch**. This site offered hotel listings (with descriptions, prices, and reservations), restaurant information, maps, local movie schedules, and more. There was even an Internet Chat Zurich page where I could add my own "Tschau!" to the ongoing conversation.

Still, our main reason for visiting Zurich was to change trains for Venice, so I sent another query to the RailServer (see above) and pointed my cursor at **http://www.lainet.com/~initaly**, the home page for ***InItaly Online***. The server was down for maintenance, so I bypassed InItaly's travel links and went directly to the ***WETVenice Home Page*** at **http://www.portve.interbusiness.it/wetvenice**.

WETVenice is one of the more useful city-sponsored travel sites that I've encountered on the Web. For example, clicking on "Train" produces a schedule of trains from other Italian cities, while "Airplane" displays airline connections from major European airports. Select "Museums," and you get a list of Venice museums with opening times and prices. Pubs and bacari (bars with yummy snacks) receive their own listings, and the Little Venetian Glossary explains that Clinton is both an American president and an illegal wine.

"Aber genug!" said my wife, interrupting my thoughts with a reminder that Austria was waiting for us beyond the Dolomites. She leaned across the keyboard and typed **http://webfoot.com/travel/guides/austria/austria.html**, which sent Internet Explorer in search of The Webfoot's Guide to Austria. Like the Paris site mentioned earlier, this Webfoot page has links to exchange rates, local time, city guides, local newspapers, language dictionaries, and other information—including the CIA Fact Book on Austria, for those who want a spook's view of a nation that many Americans confuse with Crocodile Dundee's home turf.

With "The Sound of Music" playing in the background, the Frau and I visited ***Holidays in Salzburg*** at **http://www.tcs.co.at/other.html**. Clicking on an interactive map brought us to the Salzburg city pages. Unfortunately, the connection was so sluggish that we decided to skip Salzburg and head directly for Munich in nearby Bavaria.

We found Munich on TOP (***Touristic Online Program***) at **http://www.muenchen-tourist.de**. The site included a comprehensive directory of beer gardens and a guide to Munich's Oktoberfest, complete with a map of the festival's beer tents. (My wife and I skipped the online video tour, since there's nothing more disgusting than watching people vomit at 3 frames per second.)

We also browsed ***Munich Online***, **http://www.netplace.com/netplace/enmunich_online.html**, which supplied information on hotels, subways, restaurants, museums, and other essentials.

With our Munich arrangements made, we headed for the last stop on our itinerary: Amsterdam. ***Holland Tourist Information*** claims to offer some 14,000 HTML files at its rather spartan-looking Web site, **http://www.nbt.nl/holland**. After searching the hotel and museum listings, we took a virtual canal boat to ***The Channels Amsterdam*** at **http://www.channels.nl**. This site offered us virtual tours by foot, tram, or subway, along with a clickable map and a searchable index of everything from apartment rentals to sex shops. Contact ads ("Looking for inexpensive room with friendly lesbians") were another option.

It would have been tempting to explore more of Europe, but the kids and dogs were begging for dinner. So we left the Web and headed for the kitchen—knowing that our favorite European cities would be waiting for us on the World Wide Web, even if the Boardwatch press card didn't get us past the ticket counter at the airport.◆

USEFUL URLS FOR TRAVELERS

If you're heading abroad this summer, these Web sites can help with trip planning:

City.Net, **http://www.city.net**. A superbly organized collection of links to information on cities, countries, and regions throughout the world. This should be your first stop on any virtual tour.

GNN Travel Center Guides, **http://nearnet.gnn.com/gnn/meta/travel/res/countries.html**. Another handy collection of travel links, including off-the-beaten-path countries such as Macedonia and Cyprus.

Tourism Offices Worldwide Directory, **http://www.mbnet.mb.ca/lucas/travel/tourism-offices.html**. Brian Lucas has created a searchable database of 802 tourist offices, complete with phone and fax numbers.

The Money Abroad FAQ. What's the currency of Denmark? Can you use your local ATM card in Switzerland? What three currencies are used in Laos? Visit **http://www.inria.fr/robotvis/personnel/laveau/money-faq/money-abroad.html** to find the answers.

Choose a Currency, **http://www.dna.lth.se/cgi-bin/kurt/rates**. Exchange rates between major currencies, updated daily.

Visa ATM Locator Guide, **http://www.visa.com/cgi-bin/vee/vw/products/atm/world.html?2+0**. Use the interactive country map to locate banks with Visa or PLUS cash machines.

Date and Time Gateway, **http://www.bsdi.com/date?**. A quick way to check the time in a distant city before you place a telephone call.

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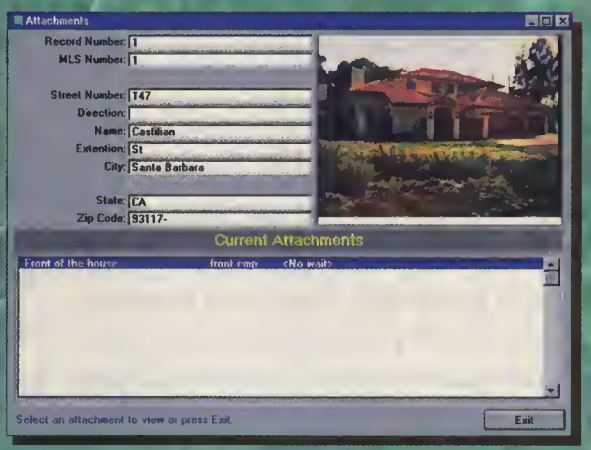

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Online Multimedia Database

by Steve Graves

In May of 1995, Sun Microsystems announced a new programming language for the Internet and World Wide Web titled JAVA. JAVA promised to make it easier to develop net aware programs and allowed development of APPLETS — small object code programs that were downloaded from a web site in the background and run by interpreters on the user's machine. Notably, the programmer could write a program, make it available online and it would in theory run on Windows machines, Macintoshes, SUN systems, or any UNIX box that sported a browser with the necessary JAVA interpreter.

In December of 1995, Netscape announced that not only had they built the JAVA interpreter into their Netscape browser, but they had added a new wrinkle — JAVASCRIPT. JavaScript is a bit like a JAVA junior — a slightly more limited programming language to handle the light work. The advantage to JavaScript is that it is simply ASCII text embedded in standard HTML documents. A JavaScript app comes down to the user with the page, and the Netscape browser "runs" the script on the client end. JavaScript apps are easier to develop and deploy than fully compiled JAVA applets. We're currently seeing more JavaScripts appearing on the web faster than JAVA applets. In this column, we will cover JavaScript development, describe techniques for writing JavaScripts, note developments in the JavaScript field, and examine some sample applications you can use on your own web page.

CLIENT-SIDE APIs

JavaScript is a client-side API (Application Programming Interface) solution for Netscape Navigator 2.0. Users must run Netscape 2.X or another JAVA-compatible browser to execute JavaScripts. Netscape-enhanced HTML extensions make possible much of JavaScript's power.

Client-side processing moves some of the processing demands from the server to the user's platform. JavaScripts are embedded in HTML documents and executed by the browser that retrieves them. (Hint: To snatch a JavaScript from a web site, use Netscape to save the page to disk. Make sure the author has given permission to use his or her script. Copyright law applies to JavaScripts.)

Steve Graves is the founder of ***Technical News Service Inc.*** *(T-N-S))* and editor of ***SysNews.Com***- The Journal of Online Products and Services. His online magazine for sysops and webmaster, includes news articles, editorials, reviews, software guides, and software libraries. As a full time software reviewer, Steve installs, runs, and maintains the BBS and Internet software he reviews. Steve lives and works in Cheverly, Md., about a half mile from Washington, D.C. with his son Brendan, age 10, and his wife, Mary. He authored the ***20 minute Chess Master***, one of the first interactive computer books. Steve holds commercial instrument, and instructor pilot certificates and enjoys reading, computers (some days), magic and music. Steve can be reached at `mail to:editor@sysnews.com`, `http://www.sysnews.com` or **(301) 773-8899** *voice* (10a.m. to 6 p.m. EST M-F)

WHAT CAN I DO WITH JAVASCRIPT?

JavaScript is best in development and delivery of interactive Web forms and handling form input. Use JavaScripts to validate data, manipulate strings and numbers, or otherwise process data entered by the user into HTML forms. JavaScript can also be used to create dynamic HTML pages that can alter the user's display depending upon the checkboxes, radio buttons or other input fields the user has modified.

JavaScript applets can handle calculations formerly performed by server-based scripts (CGI scripts for example). JavaScript uses event-handling mechanisms based on user input to handle error-checking. Users who rent space on a server may find JavaScripts are the only mechanism available to improve HTML interactivity, since some Internet hosting services restrict use of CGIs for security and performance reasons.

Suppose you wished to restrict access to your page to persons over the age of 21. You could write a JavaScript to flag user-entered birth years greater than 1976. If a user entered a year earlier than 1896, your JavaScript could also note the disparity as a probable input error, since few callers will have reached centenarian status. You could also have your program alert the user and ask him to re-enter the data.

Since JavaScripts are executed on the user's system, the program poses no risk on the server side. (Because of built-in security features, JavaScript poses little if any risk to the client, according to Netscape. For example, neither JavaScript nor JAVA can write to a hard disk.)

DEFINING AND CALLING FUNCTIONS

JavaScripts are embedded in HTML documents. Netscape has added another HMTL tag pair, **<SCRIPT>** and **</SCRIPT>**, to contain JavaScript statements. Text contained within the opening and closing SCRIPT tags is interpreted as JavaScript, i. e.,

```
<SCRIPT>
 JavaScript statements...
</SCRIPT>
```

The SCRIPT tag pair can be placed either in the BODY or the HEAD section of the HTML file. Ideally, the JavaScript should be in the HEAD section, to avoid user-triggered errors. Because the Head is the first portion of the HTML document, defining functions in the HEAD guarantees that all functions are loaded before the user has a chance to trigger an event. But you might have to include scripts within the body section if you are designing a dynamic form that calls up different form tags or HTML code based on user selections.

User inputs such as mouse clicks, field-processing and page navigation generate Events which JavaScripts can detect and respond to. JavaScripts are structured around Events. Netscape has enhanced the HTML 2.0 tags FORM, INPUT and TEXTAREA, making them Netscape-aware. Event-driven activities call scripts within the document. For example, JavaScripts can determine when a user leaves a page and then generate and display a message to the user based on the selected destination page.

LISTING 1: MY FIRST JAVA SCRIPT

```
<HTML>
<HEAD>
<SCRIPT LANGUAGE="JavaScript">
document.write("Welcome to My Web.")
</SCRIPT>
</HEAD>
<BODY>
This Page Produced with JavaScript.
</BODY>
</HTML>
```

Create a file containing only the text in Listing 1 using your favorite editor. Name and save the text as a plain ASCII file. Then open Netscape and click on **File**, then **Open File** and enter the file name. Netscape should display the following:

"Welcome to My Web. This Page Produced with JavaScript."

A CALCULATING JAVASCRIPT

Let's try something a bit more ambitious. Create a new file, enter the text in Listing 2, then save the file in plain ASCII format.

LISTING 2: CALCULATE A SQUARE

```
<HEAD>
<SCRIPT LANGUAGE="JavaScript">
<!— Begin to hide script content from old browsers
 function square(x) {
 document.write("The call passed ", x ," to the function.","<BR>")
 return x * x
 }
 document.write("The function returned ",square(7),".")
// —>
</SCRIPT>
</HEAD>
<BODY>
<BR>
Task Complete
</BODY>
```

Load and test Listing 2 with Netscape as described above. Your system should display:

The call passed 7 to the function.
The function returned 49.
Task Complete

Note that we hid our JavaScripts inside comment fields to ensure that our JavaScript code doesn't confuse old browsers. Although you can expect most browsers to support JavaScript in the near future, for now you will want to design pages that can be read by non-Netscape 2.0 users.

The Javascript of the month begins on the next page.

JavaScript of the Month

Each month I will pick and analyze a JavaScript that meets three criteria. 1. It must demonstrate JavaScripts power and flexibility. 2. It must be freely available to WebMasters. 3. The application must be unique, practical, cool, or otherwise of value to the online community. If you have written such a script or know of one, please send at `mailto:editor@sysnews.com`.

Our first JavaScript of the Month is Snark, written by Justin Boyan, a third year Carnegie-Mellon Ph.D. candidate. This very cool script interfaces your web page to multiple search engines through a search box with a scroll bar. Users can also request a weather report for any place in the U.S. WebMasters can easily customize this script. The following comments are those of Justin Boyan.

```
<!————————— SNARK —————————>

<SCRIPT>
<!— hide this script from non-JavaScript browsers

// All code in this script is Copyright(C) 1996, Justin Boyan, jab+j@cs.cmu.edu
// For documentation and more info, see: http://www.cs.cmu.edu/~jab/snark/
// This is SNARK Version 0.2, 26 Jan 1996

var MAX_ENGINES = 30;
var SNARK_STRING = "hunting+the+snark";

function MakeArray(n) {
 for (var i = 1; i <= n; i++) {
 this[i] = 0;
 }
 this.maxlen = n;
 this.len = 0;
 return this;
}

var engs = MakeArray(MAX_ENGINES);

function find_substring(needle, haystack) {
 var i, needlen = needle.length, haylen = haystack.length;
 for (i=0; i<=haylen-needlen; i++) {
 if (needle == haystack.substring(i,i+needlen))
 return i;
 }
 return false;
}

function Engine(name, opts, home, search) {
 var snark = find_substring(SNARK_STRING, search);
 this.name = name;
 this.opts = opts;
 this.home = home;
 this.pre_snark = search.substring(0,snark);
 this.post_snark= search.substring(snark+SNARK_STRING.length, search.length);
}

function Add(name, opts, home, search) {
 engs.len++;
 if (engs.len <= engs.maxlen) {
 engs[engs.len] = new Engine(name, opts, home, search)
 }
 else {
 alert("Better increase MAX_ENGINES: " + engs.len + ">" + engs.maxlen)
 }
}

// ADD YOUR OWN SEARCH ENGINES BELOW. (See
http://www.cs.cmu.edu/~jab/snark/ )


Add("Netnews: AltaVista", "",
 "http://altavista.digital.com/",
 "http://altavista.digital.com/cgi-
bin/query?pg=q&what=news&fmt=d&q=hunting+the+snark" );
```

```
Add("Shareware/Windows", "",
 "http://vsl.cnet.com/",
 "http://vsl.cnet.com/cgi-bin/vsl-master/Find?category=MS-
Windows%28all%29&search=hunting+the+snark&logop=and&and=&orfile=++
&hits=200" );

Add("Shareware/Unix", "",
 "http://vsl.cnet.com/",
 "http://vsl.cnet.com/cgi-bin/vsl-master/Find?category=UNIX&search=hunt
ing+the+snark&logop=and&and=&orfile=++&hits=200" );

Add("the Web: AltaVista", "SELECTED",
 "http://altavista.digital.com/",
 "http://altavista.digital.com/cgi-bin/query?pg=q&what=web&fmt=d&q=hunt
ing+the+snark" );

Add("the Web: Lycos", "",
 "http://www.lycos.com/",
 "http://twelve.srv.lycos.com/cgi-bin/pursuit?query=hunting+the+snark" );

Add("the Web: Yahoo!", "",
 "http://www.yahoo.com/",
 "http://search.yahoo.com/bin/search?p=hunting+the+snark" );

Add("Weather (City, ST)", "",
 "http://www.nnic.noaa.gov/cgi-bin/page?pg=netcast",
 "http://www.nnic.noaa.gov/cgi-bin/netcast.do-
it?state=hunting+the+snark&area=Local+Forecast&html=yes&match=strong")
;


// ADD YOUR OWN SEARCH ENGINES ABOVE. (See
http://www.cs.cmu.edu/~jab/snark/ )

function HandleForm(form) {
 form.submit(); // This fixes a Netscape 2.0b6a bug. How, I don't understand.

 var i, oldq=form.query.value, newq="";
 for (i=0; i<oldq.length; i++) { // compress [ ]+ into \+
 var thischar = oldq.charAt(i);
 if (thischar != ' ')
 newq += thischar;
 else if (lastchar != ' ')
 newq += '+';
 lastchar = thischar;
 }
 var eng = engs[1+form.service.selectedIndex];
 location.href = newq ? eng.pre_snark + newq + eng.post_snark : eng.home;
}

function DisplayForm() {
 document.writeln('<CENTER><FORM OnSubmit="HandleForm(this); return
false">');
 document.writeln('Search <SELECT name="service">');
 for (i=1; i <= engs.len; i++) {
 document.writeln("<OPTION " + engs[i].opts + "> " + engs[i].name);
 }
 document.writeln('</SELECT> for <INPUT size=26 name="query">');
 document.writeln('<input type=submit value=" GO!">');
 document.writeln('</FORM> </CENTER>');
}

DisplayForm();

// done hiding from old browsers -->

</SCRIPT>

<!---------- END OF SNARK ---------->
```

Note that if the query field is left blank, pressing "GO" will take the user to that search engine's home page.

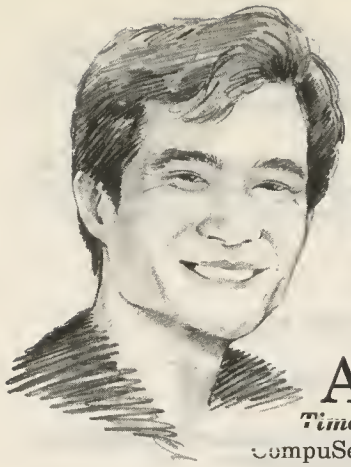
It's easy to customize your SNARK's list of search engines. Inside the script, each engine is added with a command like this:

```
<PRE>
 Add("the Web: Yahoo!",
 "",
 "http://www.yahoo.com/",

"http://search.yahoo.com/bin/search?p
=hunting+the+snark" );
</PRE>
```

The four components of an engine are its name, an option string (usually empty), its home page, and its search URL. To find an engine's search URL, manually use that engine to perform a search forthe string **<B>hunting the snark</B>**. If the URL of the search results document contains the string **<tt>hunting+the+snark</tt>** then this engine can be added to your SNARK following the example above.

Readers may type or scan the snark script or navigate to `http://www.sysnews.com/java.htm` and capture the file off my system. Save the document's HTML source, clip out the **<TT>&lt.;SCRIPT>...</SCRIPT></TT>** section in the middle, and paste it into your HTML document.◆



BIG BOARD BRIEFS by Wallace Wang

THE FUTURE OF ONLINE SERVICES?

After bombarding the country with television commercials and splashy ads in *Time*, *People* and the *Wall Street Journal*, CompuServe has officially launched ***WOW!*** their new consumer online information service. To show you how anxious CompuServe is to build WOW!'s membership, here's what you get when you subscribe to WOW!:

- A free one-month trial membership
- Unlimited use including unrestricted access to the Internet for only **$17.95** a month (**$14.95** a month for existing CIS members).
- Up to six users able to share a single account
- Parental controls to block or restrict Internet access for children

You can order your free WOW! CD from CompuServe now by calling **(800)943-6989**, visiting the WOW! web site at **http://www.wow.com**, or using the **GO WOW** command within CompuServe.

Of course, there are some drawbacks to using WOW! You can only use WOW! if you're running Windows 95 and have a CD-ROM drive. CompuServe promises that a Macintosh version of WOW! will eventually appear, although you shouldn't hold your breath waiting for it. (Most Macintosh users have long since defected to America Online anyway.)

Although CompuServe bills it as a new home consumer online service, WOW! is really a well-organized Internet provider. Instead of creating proprietary content like CompuServe or America Online, WOW! provides links to the most popular web sites around the world, organized in categories such as Entertainment, Money, Sports, and News. The only proprietary content on WOW! are its chat rooms and message boards.

You can also explore the web on your own using WOW!'s built-in Microsoft Internet Explorer browser. Unlike the ordinary version of the Microsoft Internet Explorer browser, the WOW! version gets rid of pull-down menus and replaces them with big colorful buttons that can be less intimidating to use or just plain annoying.

By avoiding proprietary content and just relying on the growing resources of the World Wide Web, WOW! may be the future that online services are heading. Given the growing popularity of the Internet, WOW! just might have a chance in the crowded online market after all.

NEWSPAPERS, MAGAZINES SWITCH LOYALTIES

It seems like weekly news magazines are changing online services faster than anyone can keep up with them, so here's what has happened at the time of this writing.

- ***Time*** has defected from America Online and opened shop on CompuServe.
- ***U.S. News & World Report*** has left CompuServe to focus on their web site.
- ***Newsweek*** is leaving Prodigy for America Online.

Of course, for the real "truth" you can always visit ***The Weekly World News*** on America Online and discover that NASA has actually taken a photograph of heaven but has banned the image from the general public. Now that's one story *Time* hasn't covered. (Do you smell a conspiracy?)

Wallace Wang is the author of ***CompuServe For Dummies***, ***Procomm Plus for Dummies*** and ***Visual Basic for Dummies*** (all published by IDG Books) as well as ***Surfing The Microsoft Network***, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: **70334.3672@compuserve.com** or **bothekat@aol.com** or **bo_the_cat@msn.com**

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BROWSER MANIA

In case you haven't been keeping track of the latest browser deals with the online services, Microsoft and Netscape have made seemingly contradictory (and confusing) deals with CompuServe and America Online.

WOW! will bundle the Microsoft Internet Explorer browser. CompuServe will use Netscape Navigator as its default browser (although you can switch to the Microsoft Internet Explorer if you want). In return for using Netscape Navigator, CompuServe gets its access phone numbers bundled with all copies of Netscape Navigator. That way if you buy a copy of Netscape Navigator, you can pay CompuServe for your Internet use.

America Online will dump its own feeble web browser and bundle the Microsoft Internet Explorer. (Of course, you can always switch to Netscape Navigator later if you want). In exchange for this favor, Microsoft will bundle America Online's communications program with Windows 95, just like Microsoft already does for their own Microsoft Network online service. (Suddenly America Online is strangely quiet about the legalities of bundling online services with Windows 95).

But to keep both Microsoft and Netscape happy, America Online's Internet service, Global Network Navigator (GNN), will bundle Netscape Navigator as its default browser. So if you access the Internet using GNN, you can use Netscape Navigator for free (although you can always switch to Microsoft Internet Explorer later if you want).

Confused? Here's a quick summary. The Microsoft Internet Explorer will be the default browser in America Online and WOW!. Netscape Navigator will be the default browser for CompuServe and GNN.

PRODIGY WOES

After Sears tried to bail out of Prodigy for $500 million and no one in their right mind wanted it, Prodigy's own management has offered to buy out Prodigy from both Sears and IBM for a measly $250 million. Prodigy hopes to redesign its service and offer a new Internet service using Internet technology. The original Prodigy service may be retained under the name "Prodigy Classic" (or how about "We're number 3 and sinking fast") while the new Prodigy Internet service will go under a different name.
In its first move, Prodigy plans to offers all its financial services through the World Wide Web, giving every Internet user access to Prodigy's online banking and financial services. Prodigy also plans to offer a series of regularly scheduled late night programming online. The first offering, dubbed "The Night People," offers nightly live interaction for members of the Prodigy service as well as a constantly freshened web site that's open to the Internet at **http://www.prodigy.nightpeople.com**.

Prodigy has announced layoffs that will likely continue until Prodigy either follows eWorld into the dusty world of computer history or miraculously survives and remains a competitor to America Online, CompuServe, and WOW!

EXPLAIN THE UNEXPLAINED ON AMERICA ONLINE

A small group of people in New Mexico are plagued by a phantom noise that only they can hear. Black helicopters are buzzing small towns across America and the military isn't offering any explanations. Government conspiracies? Alien encounters? Paranormal phenomena? Bored people with nothing to do but make up conspiracy theories that don't make any sense? Find the answers yourself in the new ParaScope forum on America Online. Unlike the lurid stories provided by the ***Weekly World News***, ParaScope takes a serious and critical look at today's unexplained phenomena.

COMPUSERVE GOES PUBLIC

CompuServe stock opened at $30 a share, which makes the entire company worth approximately $2.4 billion. The stock offering raised about $460 million for CompuServe's parent company, H&R Block Inc., which will continue to own about 82 percent of the company until it spins off the rest to shareholders in about a year.

Over 12 million shares were sold in the United States and another 4 million shares were sold overseas. Given the rapid pace of change in the computer industry, investing in CompuServe stock may either be a wise, long-term move or a disastrous one if America Online steam-rolls over them in the online market.

INDECENT ACTS

In the midst of a court challenge to the Communications Decency Act provisions of the Telecommunications Act of 1996, America Online is considering posting moderators in chat rooms or screening chat room messages.

A fundamentalist Christian group has demanded that the Justice Department open a criminal investigation of CompuServe. The American Family Association claims that CompuServe offers "pornography and other sexually oriented materials ... to its users, including children." The group singled out a service called MacGlamour (**GO MACGLAM**), an adult forum that offers color photos of naked women. The service was promoted on CompuServe's "What's New" screen when subscribers connected at the end of March.

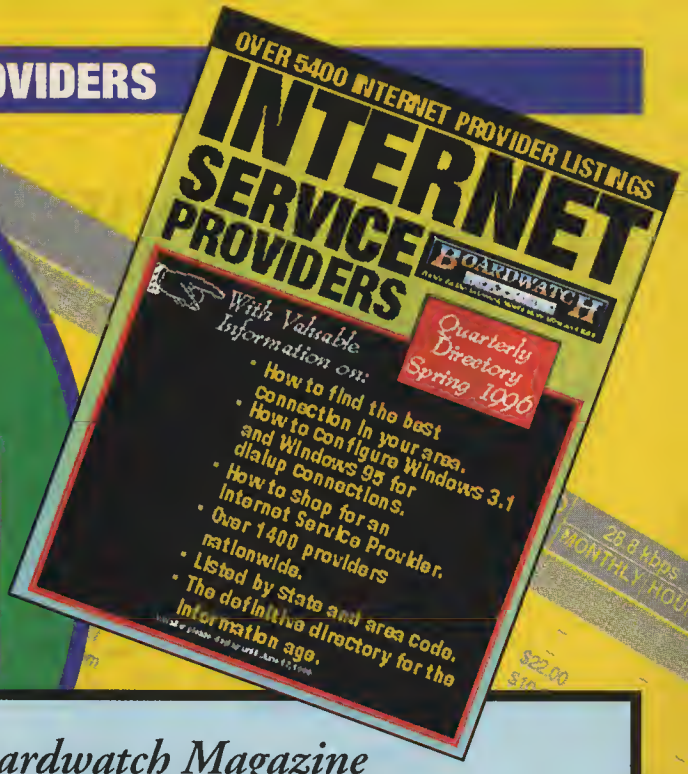
While the area is labeled as containing adult material and gives instructions on how users can block the service from their computers, it's likely that most teenagers won't bother telling their parents that this forum even exists. Gee, you can actually see women's breasts (and other parts) that look surprisingly like a picture you might find in Playboy or Penthouse.

CompuServe has publicly stated that they do not offer pornography, leaving the definition of "pornography" for the courts to decide. According to the Supreme Court, pornography is any image without artistic merit that encourages sexual thoughts, which caused comedian Bill Hicks to comment that this definition covers every TV commercial he's ever seen.

The Justice Department has agreed not to prosecute anyone for alleged violations of the CDA until a special 3-judge court in Philadelphia rules on the suit filed by the ACLU, et. al. ◆

DIRECTORY OF INTERNET SERVICE PROVIDERS

IT'S HERE!



In addition to the provider directory the *Boardwatch Magazine Directory of Internet Service Providers* also contains valuable information on:

Detailed instructions on how to get connected to the Internet

Why get on the Internet

How to configure hardware to get on the Internet and how to use it once you're there

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How many people are really on the Internet and who they are

and much more!

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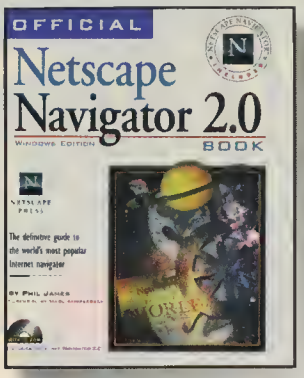
Guide to the Internet, World Wide Web and BBS



BOOK BYTES by L. Detweiler

The Official Netscape Navigator 2.0 Book
Windows Edition
By Phil James, foreword by Marc Andreessen
1996, Netscape Press
(Ventana Communications Corp.)
656 pages, **$29.95**
ISBN 1-56604-347-6
http://www.netscapepress.com
http://www.vmedia.com
(800)743-5369

We highly recommend this book as an ideal way to get Netscape 2.0 and learn how to use it. This reasonably priced package contains a CD with Windows 3.x and Windows 95 versions of Netscape.

Users who expect the CD to be jam-packed-full with a massive array of toys and goodies are going to be disappointed; it simply includes the Netscape Navigator software and a bookmark-file version of the book's Chapter 11 – "Our Favorite Net Resources" – along with blurbs about other Netscape Press titles: Livewire, Navigator Gold, HTML Publishing for Netscape, Multimedia Publishing for Netscape, and Netscape Power Users Toolkit.

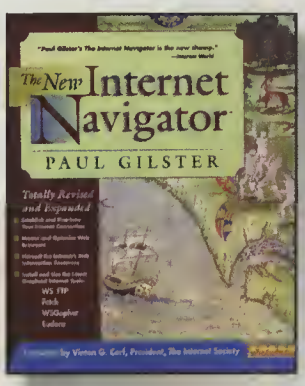
The book contains good installation sections that include many screen snapshots and give careful, step-by-step instructions. They can help the reader avoid frustrating pitfalls, such as picking the Microsoft Network option that doesn't allow SLIP. Proper configuration is a good defense against any Netscape "frownloads" (long downloads that end with something you can't get to work).

The layout artists did an excellent job of avoiding some of the overwhelming visual clutter found in many similar books about the online area, and the chapters are logically structured. There is one chapter each for mail, newsgroup reading, FTP, gopher/telnet, and "sound and graphics in Netscape."

The Java coverage is minimal, which probably reflects the embryonic state of Java at the time the book was written. The author opines that Java is very significant and will have far-ranging implications in the future, but that it is fragile and inelegant at this time. Judging from this "official Netscape book," Netscape is (wisely) not putting all its eggs in the Java basket.

The book reflects Andreessen's enthusiasm for the new Plug-Ins feature. James provides a table of numerous plug-ins that are already available, including Macromedia Shockwave, Adobe Acrobat Plug-in, RealAudio, Iconovex AnchorPage, and WebFX, with a few pages covering installation and use of the latter. Some coverage of Netscape security features such as SSL and certificates rounds out the chapters.

The final 40 per cent of the book is dedicated to descriptions and screenshots of "our favorite sites" that can also be hit from the CD. Overall we find this a very handsome, polished, and attractive book to own, and we commend Netscape for their almost humanitarian effort in bringing their pioneering, quality software to the masses for such low cost to individual users. This book is flying off the shelves of retailers.



The New Internet Navigator
by Paul Gilster
1995, John Wiley and Sons, Inc.
735 pages, **$24.95**
ISBN 0471-12694-2
http://www.wiley.com/CompBooks
(800)225-5945

Gilster's tome could appropriately be called, "The Internet Encyclopedia." This book is highly recommended for those who are interested in the meat and bones of the Internet and don't want to be limited to the glossy brochure-like interface of the Web. The Web coverage is focused mostly in a single chapter. The book describes many of the non-GUI aspects of the Internet and gives many screen shots of text-based interfaces to newsreaders, mailers, etc. There is extensive coverage of the variations on Internet e-mail, such as Unix front ends, and the services available via e-mail, like mailing lists.

Gilster includes sections on the different ways of connecting to the Internet, describing all their ramifications, and has good appendices that list Internet providers. Overall this would be an excellent volume for those interested in the more substantial aspects of the Internet that make it useful, rewarding, and a place to repeatedly visit. But people who are interested solely in GUI interfaces to the Internet may be better off with other books. Also it is questionable how long the UNIX text-based interfaces, which Gilster at times seems to favor, will persist.

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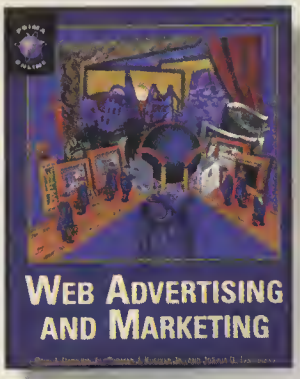

Web Advertising and Marketing
Paul J. Dowling Jr., Thomas J. Kuegler Jr. and Joshua O. Testerman
504 pages, **$34.95**
1996, Prima Publishing
ISBN 0-7615-0383-8
(916)632-4400

The gems of books are often those that contain a lot of distilled wisdom from people who are intimately familiar with a field. After reading them one tends to think that there couldn't have been a better marriage of the authors and the subject matter. Dowling, Kuegler, and Testerman are the founders of a fledgling web advertising company called Skyline Network Technologies. They give a very engaging "real-world" presentation of their subject. The pages exude wisdom gleaned from long experience. The book contains many pullout boxes that describe the authors' experience and personal anecdotes associated with the particular aspect of Web marketing being discussed.

The chapters and headings are often entertaining, with titles like "Internet Psychology: Understanding the Internet Mind," "Be Kind to Internet Newbies," "To Click or Not to Click," "The Care and Feeding of Your Web Site." The book is nicely organized, highly browsable, and contains many dense nuggets of information. A chapter on "Myths and Facts" will be a breath of fresh air for anyone who has been overwhelmed by web hype. The combination of detail and engaging style is rarely found elsewhere. Somehow the authors have captured the irresistible, paradoxical, and intoxicating mix of business and pleasure in their book that epitomizes the web.

All the key areas such as security, credit cards, and platforms are well covered. Particularly useful are the scenarios of different sized companies and the kind of web options and approaches they might choose based on budget. We would like to have seen even more detail here. The authors include web and Internet demographics and statistics that compare web-based marketing exposure and cost with other marketing approaches.

We would like to see a comprehensive comparison of different web server technologies, including their cost, scalability, security, load capacity, particular specialties, etc. These are the kind of details that readers lust after when making long-term expensive decisions. We get the feeling the authors may need to do a bit more homework here anyway; one of their mini-pullout-anecdotes describes their loss of a contract because they weren't running the more expensive secure version of their server software.

Overall this book stands out brightly in its increasingly crowded niche. The somewhat lighthearted tone appropriately conveys the atmosphere of the web. Yet the book contains extremely valuable suggestions and recipes. For anyone who wants coverage that's highly practical but less serious and overwhelming, we highly recommend this tome. ◆

LIST OF THE MONTH:

Sue's GARDENLINK
The Amateur Gardener's Resource
http://www.synapse.net/~ewl

Sue Blyth of Constance Bay, Ontario, has been an avid gardener all her life. Gerry, her husband, is a programmer for Electronic Warfare Associates. Together they discovered the Internet in 1994. Sue joined the Gardens List mail list, and soon harvested a bumper crop of garden and plant related links. To subscribe to the Gardens List, send **mailto:listserv@ukcc.uky.edu** with the message **subscribe gardens <your name>.**

Gerry persuaded Sue it would be fun to create a Web site devoted to gardening resources on the Net, and volunteered to be Sue's "webslave." She writes and edits, he codes the pages using HTML Assistant v1.4. Since many of her visitors use text-only browsers, Sue keeps the graphics to a minimum. The result is a tasteful blend of efficiency and style.

GardenLink is an ever-changing news magazine. Sue reviews a "Gotta Visit" site each week, like Dan Gardner's Unofficial World Class Giant Pumpkin Homepage at **http://athenet.net/~dang/pumpkins.html**. She also spotlights gardening tutorials available on the Net, such as "Weed Management for Wildflowers" and "Planting Techniques for Trees and Shrubs." Gerry freshens the site with Java applets, search engine forms and other techno-widgets. There's also a free classified ads section featuring books, catalogs, plants, seeds and other items for sale or trade.

The list of links is constantly updated; following are a few from the April 22 edition:

International page of Wild-Flowers
http://www.wild-flowers.com
Herbal Touch gardens & gift shop
http://www.kwic.com/~herbs
Weekend Gardener weekly newsletter
http://www.chestnut-sw.com/weekend.htm
Northern Gardener
http://www.geocities.com/RainForest/1329
GARLIC Page
http://broadcast.com/garlic.htm
Joyce Schillen's Garden Pages
http://www.cdsnet.net/Business/GardenPages
John's Rainbow Garden
http://www.geocities.com/WestHollywood/2445
Elk Mountain Nursery mail order catalog
http://gate.ioa.com:80/home/elkmountain
Rhododendron Pages
http://haven.ios.com/~mckenzie/rhodo05.html
Erma's Herbs mail order catalog
http://www.bizcafe.com/sspecial/ermaherb.html
Agriculture Online, flowers, cattle & crops
http://www.agriculture.com
Niche Gardens No. Carolina nursery
http://www.nichegdn.com
Time-Life Complete Gardener Encyclopedia
http://www.timeinc.com/vg/TimeLife/CG/vg-search.html
Master Gardener Encyclopedia
gopher://leviathan.tamu.edu/11s/mg
Complete Guide to Garden Stuff
http://www.btw.com:80/garden_archive/toc.html
GardenNet
http://trine.com/GardenNet
Garden Gate on Prairienet
http://www.prairienet.org:80/ag/garden

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- **Technology Front** — hands-on evaluations of breakthrough products for Internet Service Providers and content producers
- **Dr. Bob** — revealing interviews with the most influential and successful Internet dignitaries
- **Consummate Winsock Apps** — half a dozen of the best Winsock applications released each month
- **Cyberworld Monitor** — investigative reports of how government and corporations are shaping the future of the Internet
- **Education Link** — resource center and forum for K-12 and postsecondary educators
- **Legally Online** — incisive examinations of court cases and legislation that affect the online business

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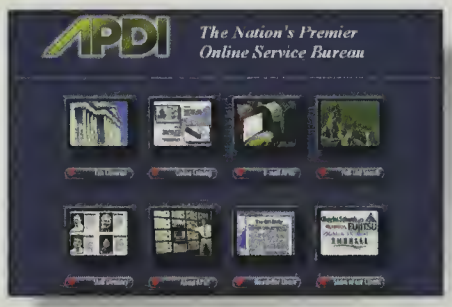
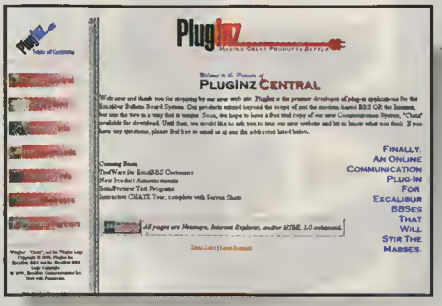


http://www.apdi.net

Application Programming and Development: APDI is the nation's premier online service bureau, with over 500 simultaneous connect lines. Provides customized systems for corporate and professional organizations nationwide.

http://www.planetc.com

Planet Systems, Inc: Satellite Distribution of Information Products for Online Services, Skylink, Planet Connect, and Planet Connect TV. Includes UPI News and Pictures, Stock Market and Financial Data, Accu-Weather.



http://www.pluginz.com

Pluginz is the developer of Chatz, the Multi-User Conferencing System built exclusively for the Excalibur BBS platform. 100% customer satisfaction is our goal. Telnet into **`@pluginzbbs.com for a live demo`**.

http://www.murkworks.com

MurkWorks, Inc Developers of BBSNet, IPDoor, and WorldSock. Powerful Internet access add-ons for most popular BBSs. Provide ANSI & RIP 'net clients, SLIP & PPP and painless Winsock access. New booth #1238.

http://www.cyclades.com

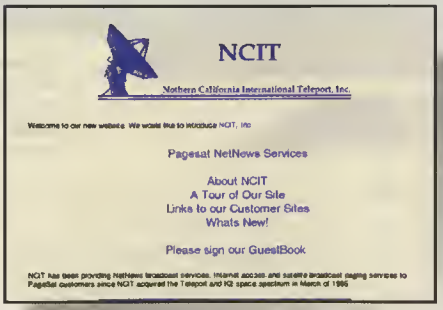
Cyclades Corporation Designs, develops and markets high performance connectiviy products such as multiport serial cards. Operating system supoorted: BSD/OS, Windows NT, Linux, SLO, Free BSD and many more.

http://www.AwareNET.com/AwareLink

Offer your subscribers and visitors Custom Generated Information by accessing the AwareNET Infobot! Our real-time system calculates, securely bills and generates Personal Strategic Life Information. Don't lose your traffic to outlinks! Showcase and Resell our Compelling Content and we'll send your traffic right back to you!

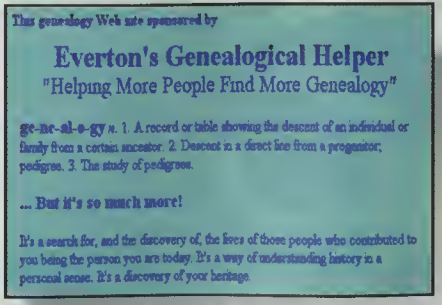
http://pcmvisual.com

Key Travel.PCM Visual Listing Service creates and designs software and applications which run on the internet. Internet service providers, web design, web servers, domains.



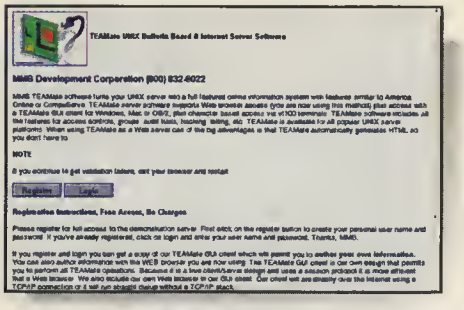
http://www.ncit.net

Northern California International Teleport: Providers of Internet Access, Fidonet, E-Mail, high speed (115KBPS) satellite delivered NetNews and broadcast paging services to PageSat customers.



http://www.everton.com

"Everton's Genealogical Helper," the largest genealogical magazine in the world. Provides links to the best genealogical resources on the WWW, links to an online genealogical magazine and On-Line Search with over 70 million ancestor names.



http://mmb.com

MMB Development: Developer of MMB TEAMate UNIX WEB BBS. TEAMate software now includes an integral WWW browser allowing you to mix HTML and other data within your TEAMate Bulletin Board.

http://www.durand.com

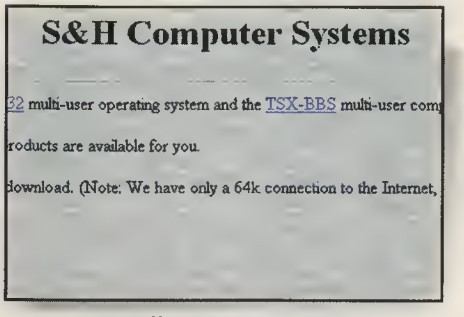
Durand Communications: GET INTERACTIVE with Durand's all new client/server applications platform MINDWIRE. MindWire and MindWire NT enable you to create a customized interactive Internet service.

http://www.esoft.com

eSoft, Inc: We got our start 14 years ago with TBBS. Now the The Internet Protocol Adapter, or IPAD, is our primary product. The IPAD lets you build a full-function Internet presence without specialized expertise.

http://www.comtrol.com

COMTROL: A worldwide supplier of connectivity products including RocketPort and Hostess controllers for ISA and MicroChannel compatible microcomputers. Developer toolkits are also available for integration into Windows, DOS, and UNIX applications.

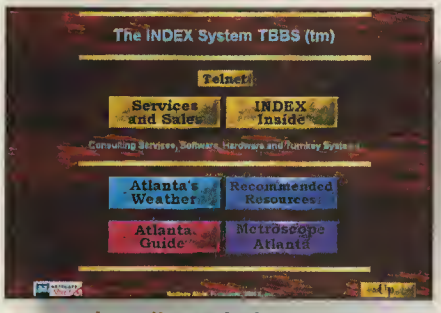


http://www.sandh.com

S&H Computer Systems: ISP? WWW server? Chat, Forums, Files, CD-ROMs, BBS? TSX-Online is the most powerful, fully integrated solution. A product of S&H's 20 year heritage of excellence.

http://www.logicom.com

Logicom, Inc: Your Worldgroup Source and Galacticomm's largest Ambassador Reseller. Check our site for information on the Total Internet Turnkey System, that combines a Web Server, Independent Online Service, Internet Server, and Fax Broadcast Server all in one.



http://www.index.com

The Index System: We are a full-service company specializing in telecommunications hardware and software, BBSs and related applications. For everything from sales and on-site installation to internet connectivity for BBSs and consulting , we're the BBS experts.

http://www.gcomm.com

Galacticomm, Inc: Since 1985, our corporate mission has been: "To do really cool things in the field of computerized communications and make a buck at it." When you see what we've packed into Worldgroup, we think you'll agree. Download Worldgroup Client software from our site.

http://www.hvs.com

High Velocity Software: Dedicated to producing high quality software for use with Galacticomm's The Major BBS and Worldgroup platforms. Just give us a call and tell us what you are looking for. We provide everything from basic system design to custom applications.

http://www.mustang.com

Mustang Software, Inc: Producer of QmodemPro, the first communication package that delivers all the features and performance to get the most from the new Windows platform. It offers communication and Internet capabilities beyond the standard terminal software.

http://www.hayes.com

Hayes Microcomputer Products, Inc: Developer and manufacturer of PC, Macintosh, and PCMCIA modems, communications software for PCs, Windows, Macintosh computers, and high-speed serial ports to protect and enhance data transmissions.

http://www.dsafe.com

DataSafe Publications, Inc: Efforts to customize THe GaRBaGe DuMP, our own 135-line nationwide BBS, lead us into becoming a software vendor and Ambassador dealer for The Major BBS and Worldgroup. We write our software and thoroughly test it all on our live system.

http://www.absbank.com

American Banking Systems: The first company ever to introduce software and services to accept check payments online, ABS is now the leader in online financial transaction processing. We feature Online Checks Direct, Credit Card Pay and our brand new Web Pay suite.

http://www.ascend.com

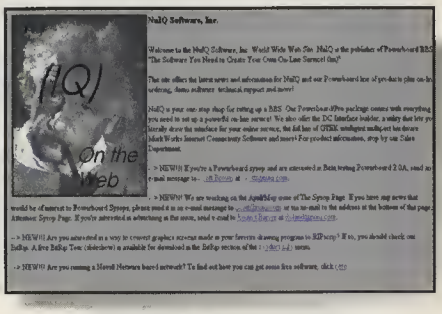
Ascend Communications, Inc.: Leading, worldwide provider of remote networking solutions for corporate sites, remote offices and Internet Service Providers' PoPs for applications such as remote LAN and Internet access, SOHO connectivity, telecommuting, and video/multimedia access.

http://www.fia.net

First Internet Franchise Corp: Fast growing turnkey ISP franchise includes training, expanded profit center, integrated billing software, professional marketing materials, Intranet products, and Wildcat! Superstore. For new or existing ISP's!

http://www.excalbbs.com

Excalibur is the original Windows Based BBS and now has full internet connectivity. All it takes is a simple internet connection and you can wire your BBS to the world. See why Windows Magazine named Excalibur BBS to its 1995 Win 100.

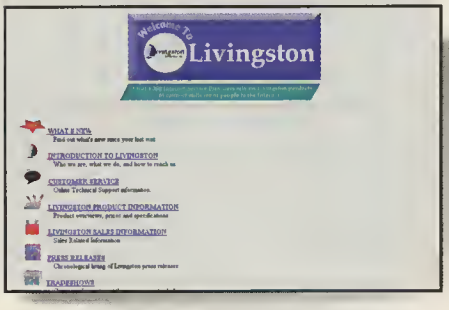


http://www.nuiq.com

NuIQ Software, Inc.: Makers of "Software to Create your own online service(tm)," NuIQ offers the Powerboard BBS software package. If you're looking for a complete package you can get up and running fast, check out our software.

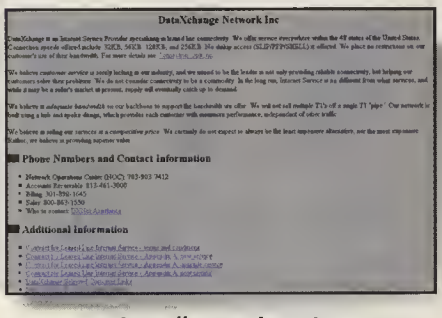
http://www.gtek.com

GTEK is the leading manufacturer of High Speed Multiport Serial Boards. Our cards are used worldwide in Bulletin Boards and data acquisition systems. We have been in business for over 13 years providing quality products to our customers worldwide.



http://www.livingston.com

Livingston: Over 1,500 Internet Service Providers rely on Livingston products to connect millions of people to the Internet.



http://www.dx.net

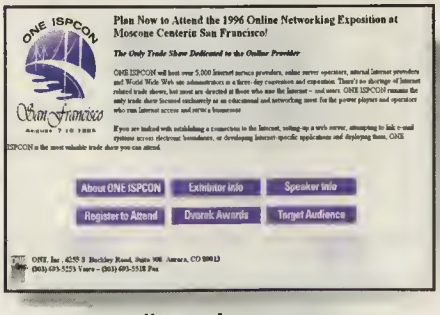
DataXchange provides dedicated leased line service (56Kb, fractional T1 andT1) in the 48 contiguous states. News (usegroups), DNS services, and award winning 24hr. customer service are included.

http://www.kirbynet.com

Kirby Information Systems, Inc.: High Quality Internet Service Provider offers total & unlimited access at value price to South-Western CT also WebPage Development and Computer Consulting, Networking and Repair Services.

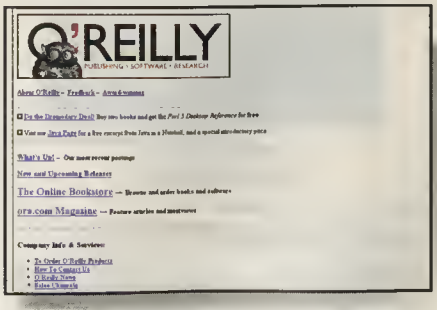
http://nmol.com

ProDesign: Specializing in professional business applications and custom software development for the Worldgroup and Major BBS platforms.



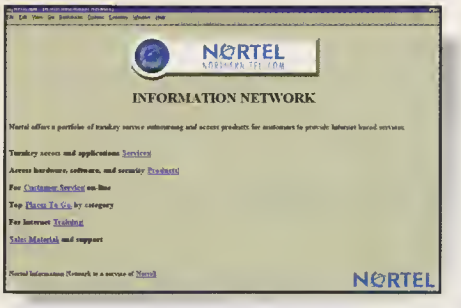
http://www.ispcon.com

Online Networking Expositions, Inc. (ONE, Inc.) Since 1991, has been responsible for all logistics and management of ONE BBSCON. The 1996 convention and trade show has been renamed ONE ISPCON, and will host over 5000 ISP's, Online Service Operators and WWW site administrators. The 1996 show will be held in San Francisco, Aug. 7-10, 1996.



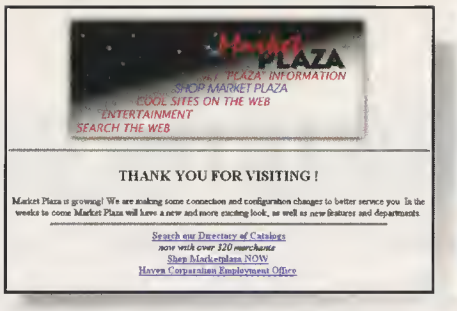
http://www.ora.com

O'Reilly & Associates is recognized worldwide for its definative books on the Internet and UNIX, as well as Internet software including WebSite (Web server software) and WebBoard (Web conferencing system)



http://www.isdn.nortel.net.com

Northern Telecom's Digital Velocity ISDN BBS Website: Comprehensive information on ISDN communications. Official ISDN BBS list. Includes information on services, providers, and equipment to utilize ISDN. Website offers on-line forums, direct telnet to BBS, and mailing lists subscriptions for the latest in ISDN technology information

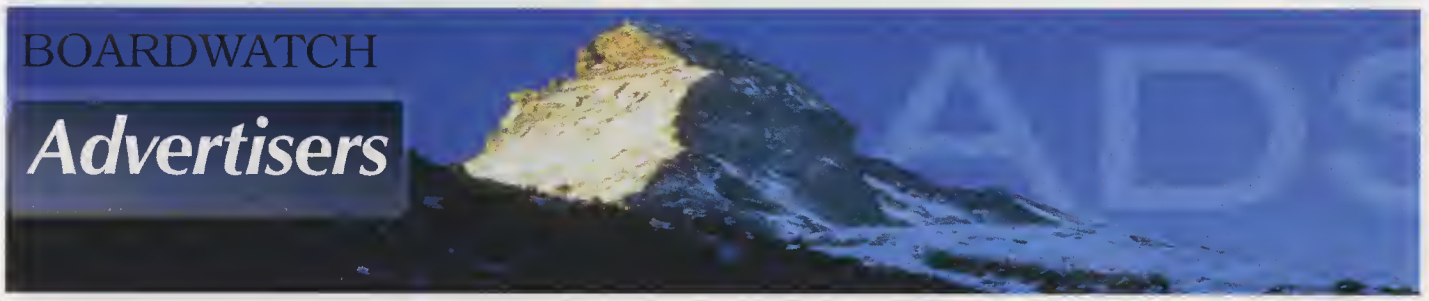


http://www.marketplace.com

Market Plaza: We specialize in state-of-art web development and innovative on-line shopping including Mail Order Wizard, Tracy Otsuka, Bridge Kitchenware, Ever's Toy Store, and CAts, Cats & More Cats

http://www.virtualecstasy.com

Virtual Ecstasy: Virtual ecstasy offers the hottest online entertainment: LIVE INTERACTIVE CONFERENCING. You won't believe your eyes!!



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UNI-ROM 96
US Online 109
WebSoft 41
Xircom. 32
Yokohama Telecom. 38

DVORAK ONLINE by John C. Dvorak

DVORAK'S FIVE AXIOMS OF THE WEB

I was reading in one of the "home" computer magazines how futurist Paul Saffo had equated the Web and the Internet in general with the early days of the plastics industry. Others have equated it with the industrial revolution. I'm sure the early days of automobile making has been done too. I shake my head when I read these nonsensical analogies since there is really nothing to equate.

The Web is part of a continuum, not some repeat of history. And it's part of a media continuum, which has absolutely nothing to do with plastics, cars or any other tangible asset business of the past. The fact that the writer who uncovered the Saffo analogy went bonkers over it was a sad commentary on what passes for computer journalism nowadays. This is largely due to the low pay writers tend to get in trade publishing. This might well change as web publishing gets up a head of steam.

What has kept writers pay low is the fact that the costs of printing, paper and distribution have risen steadily — all at the expense of the editorial budget. Writers' fees have changed very little since the 1950's in fact. Seventy per cent of the cost of a publication is printing and paper and distribution. Eliminate this and the economics of publishing change drastically.

In this column I'm not going to dwell on the economics as much as the sociology of web publishing with some thoughts and observations I've made over the past 6 months. I consider them Axioms. You can take them or leave them, but if I were you, I'd take them very seriously.

1. A web publication must be free.

In many instances there are reasons to register at the site — a process that should be an option, not mandatory. This is done for advertising and research. There should never be a fee associated with accessing the site except in rare instances.

The only reason for today's fee associated with publishing is to subsidize the printing and paper costs. What is the rationale for charging money for a webzine unless it's a non-profit, no-advertising newsletter with extremely specialized information for a small audience? Anything that is mass-market or general interest such as the ***San Jose Mercury News*** or the ***Wall Street Journal*** should be free and paid for by advertising. Advertisers want lots of numbers, they don't want to be in a limited distribution publication. So why choke off readers by charging them? It makes no sense. The fact that advertising pays the bills on first-rate TV productions (viewed free) costing millions of dollars over a season shows how powerful the advertising model can be. It should work the same way on the Web.

People who say that advertising will ruin the web and the Internet are not paying attention to reality. The Internet without advertising dollars can not sustain a web with wonderful sites. It would degenerate into a pathetic hobbyist and vanity site mess overnight. Artists and writers need to get paid. Is that hard to imagine? The hackers who have ranted about the commercialization of the web have it backwards. Commercialization is good, not bad. Commercialization is what makes good things happen by bringing income to artists and writers so they don't have to go to work in a PR agency or McDonald's to make an income. It also brings a lot of crap to the table, but not as much crap as amateurs bring naturally to a non-commercial scene. Just go look at some of the nonsense, lies and disinformation you can find on those hippy-dippy New Age sites that lurk on the Web.

That's all we'd have. Commercialization brings with it some professionalism. And when you are being dished a daily dose of news and analysis, believe me, you want people who are well paid and professional doing the dishing. I don't want to get my news from a wannabee trying to break into reporting the hard way. That's what would be standard fare in a non-commercial web scene. And worse than that would be a situation where you had to pay for every tidbit of information thanks to some cybercash scheme where the site people would be nickel-and-diming us to death. This was the prediction of the way things would be by many pundits including myself. But I now see that paying for stuff on the Internet is going to be the exception rather than the rule.

2. You can make money on the Internet if you try.

Can you? I keep hearing these same remarks. "As soon as someone figures out how to make money on the Internet..." or "The problem is you can't make money on the Internet." While few sites make money there is no question that you can make money because many sites make plenty of money.

You can sell stuff on the net. Compact disk guys are making tons of money. Look at ***Virtual Vineyards*** too. Advertising-oriented sites can make money. ***C\|net*** has sold out its ad inventory as have others.

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for ***MacUser***, ***PC Computing***, ***DEC Professional***, ***Information Technology***, and his featured "*Inside Track*" column in ***PC Magazine***, Dvorak is the author of several best-selling books,including ***Dvorak's Inside Track to DOS & PC Performance***, ***Dvorak's Guide to PC Telecommunications***, and ***Dvorak's Inside Track to the Mac***. *John can be reached at* ***mailto: dvorak@aol.com***

ZDnet is another good example of money being made. The notion that you can't make money is promoted mostly by ***Wired*** magazine, which seems to be pissed off over the fact that its ***Hotwired*** web-zine apparently doesn't make money. So it concludes that since they are geniuses and can't make money then it must be impossible to make money. A slightly self-absorbed attitude.

Wired also has some sort of weird and never-ending grudge against both Paul Allen and Ziff-Davis which needs to be explored. Paul Allen is a major investor in C|net, a hot ticket insofar as online action is concerned — there's the hate C|net connection. Since both C|net and ZD seem to be doing what Hotwired cannot accomplish, namely make money, ***Wired*** hopes to stem the tide and convince people that making money is impossible in hopes of turning potential advertisers away from the Web.

This is so ironic since ***Wired*** was the earliest promoter of the Web. Why turn negative now out of spite? It sure doesn't serve the readers well.

Then in an April Fool's Day article they made fun of their own negative opinions by exaggerating them even more. In fact if they had a positive attitude they would have done the piece to the opposite extreme talking, perhaps, about how large agencies were going to advertise exclusively on the Web, spending more than you can imagine. Unfortunately for ***Wired***, real research will show that money can be made and in fact web advertising is the future. So next time somebody tells you that you can't make money on the Internet ask if they read ***Wired***. You'll see where it's coming from.

3. The Web is a direct threat to magazines, newspapers and books but not TV and radio.

If someone wants to equate the Web to some past phenomenon, look at the history of publishing and see how each new distribution method and each new development changed the panorama. The rise of newspapers and magazines, with information subsidized by advertising, is the closest thing we have to the Web. Some will also point out that Radio and TV fit into this analogy and I agree to a point — the advertising point.

The fact is that there are two basic information distribution traditions: oral and written. Written is the newer of the two (historically) and so much newer that it has never caught up to the jazzy developments in oral tradition. Some of the mediums of oral tradition include: story-telling, plays/theater, movies, recordings, radio and television. Some of the mediums of written tradition include: cave paintings, stone tablets, hieroglyphs, ideographs, phonetic alphabet, movable typeset books, magazines, newspapers, CD-ROMs.

It might be argued that the CD-ROM and the Web incorporate aspects of both traditions and makes something new. This is possible but seems unlikely. I think that both are written tradition mediums which use some visuals as window dressing. CD-ROMs, if too filled with oral tradition production, BECOME a compact disk or a video disk and are simply misnamed. Insofar as the web is concerned, there will not develop a critical mass of high-speed users worldwide to keep it from becoming a medium for the written word. Internet TV and radio are curiosities and sideshows that jazz up the pages but are really just window dressing. We are not going to watch TV shows over the Internet. We might listen to some broadcast radio if we have no other way of accessing it, but it will remain a small part of the bigger trend.

4. It's the Content, Stupid!

It's content that drives the Web, period. It's not TV or radio or goofy sites. These diversions are fun and worth reporting on, but they are not the driving force behind the Web. It's content. The millions of users of Yahoo and Alta Vista use those services to find out where the content is located. If there were no content there'd be no web — there'd be no Alta Vista. Let's make sure we have this simple concept down pat!

5. The Web is not the Internet and the Internet is not the Web.

For some reason the two things seem to be mixed up together. The Web has caused the explosion in interest, nothing else has done this. Curiously, e-mail may still be the most common use for the Net. But the Net's increase in popularity is a direct result of Web-mania and the sudden surge of interest in the Web. People quickly want to use the Web delivery mechanism — the Internet — for other things and mail is on the top of the list. But we should never mix up the Internet with the Web. The Web uses the Internet but it is not the Internet. And the Internet is just a network, it is not the World Wide Web. Newcomers seem to have the most trouble with this simple notion.◆

DVORAK'S RECIPE NOOK

RECIPES FOR ALLERGY SUFFERERS

John is on a diet this month. To help him avoid temptation, Editor at Fault David Hakala presents this month's recipe.

Food allergies affect millions of people, and can make meal planning a major project. Symptoms range from obvious signs like hives or a burning sensation in one's mouth to subtle tips like dark circles under the eyes or waking up at exactly the same, early time each morning.

Soybean oil, virtually every spice except salt, nuts, citrus products, bananas and Brussel sprouts are on my banned list. Still I manage to make tasty meals, like this one:

ARTICHOKE CHICKEN

4-6 boneless chicken breasts
2 tablespoons safflower oil
12 or 16 oz. can of artichoke hearts

Coat chicken with flour and brown in oil in frying pan, about 5 minutes per side. Pour artichoke hearts and juices over chicken, add 1-1/2 cups of water. Cover and simmer for 40-45 minutes, stirring occasionally. The juice and water boil down to a tasty gravy.

More recipes for allergy sufferers can be found at **http://www.cs.unc.edu/~kupstas/FAQ_recipes.html**

Companies who win know what it takes.

And it takes TBBS.

Winning in the marketplace takes more than good ideas and hard work – it takes the right tools. Businesses who know how to win have an instinctive ability to recognize tools which have that rare combination of power, flexibility and reliability that make them special. Average tools yield average results, even in the hands of a craftsman. But a tool that is right for the job makes a craftsman of anyone who learns to use it. You can identify such a tool when you continue to see it used by winners year after year.

"Creative Labs Blasts To Front Competitive Multimedia Field "
Creative Labs®
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Largest Software Developer Microsoft Download Service
BBS # (206) 93[illegible]735

"Intel Crushes Competition In Battle For CPU Supremacy"
Intel®
Producer of Microprocessor and PC Enhancements
BBS # (503) 645-6275

The fact that for 14 years, TBBS has been the choice for more industrial-strength business BBS than any other software speaks for itself. If winning is your goal, call (303) 699-6565 for more information and access to a demonstration system.

eSoft
eSoft, Incorporated
15200 E. Girard Ave.
Suite 3000
Aurora, CO 80014

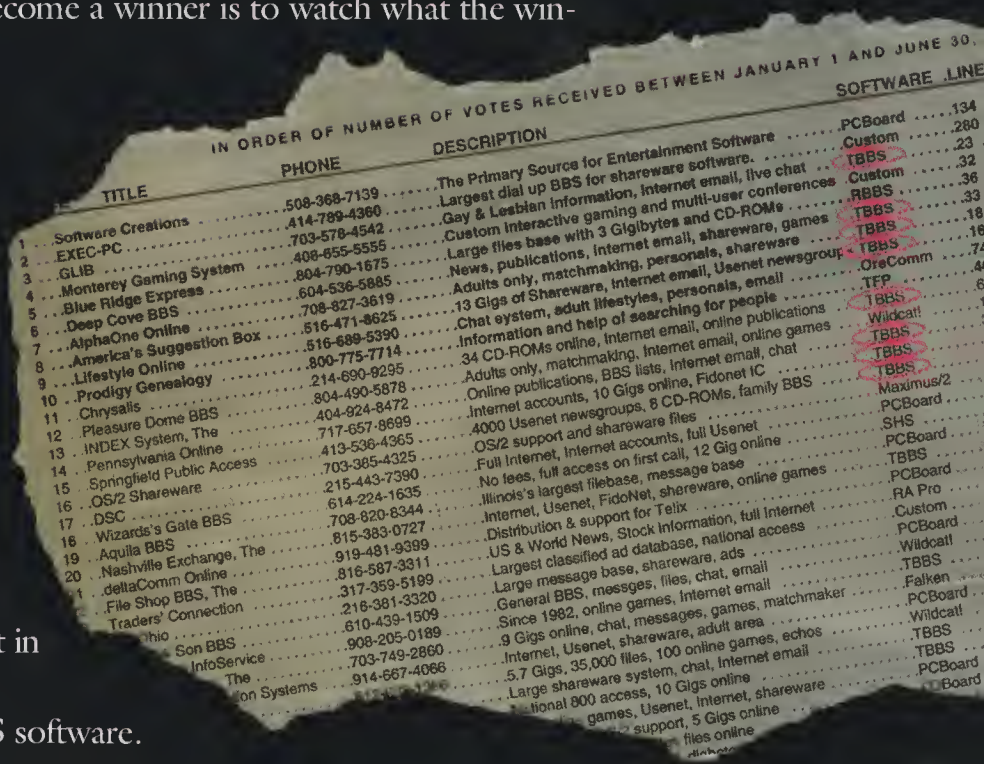
TBBS. The BBS people love to run.

Sysops who win know what it takes.

Eight of the top 15 winners in the Boardwatch 100 run TBBS.

You've set your goals and made the commitment to build a BBS. But hard work alone does not guarantee a win. The best way to become a winner is to watch what the winners do and follow their example.

It doesn't matter if you define winning as making the top 10, the top 20, the top fourth, the top third, or even the top half – you'll see more winners use TBBS than anything else. It's easy to get lost in technical details when selecting BBS software.



IN ORDER OF NUMBER OF VOTES RECEIVED BETWEEN JANUARY 1 AND JUNE 30,

	TITLE	PHONE	DESCRIPTION	SOFTWARE	LINE
1	Software Creations	508-368-7139	The Primary Source for Entertainment Software	PCBoard	134
2	EXEC-PC	414-789-4360	Largest dial up BBS for shareware software.	Custom	280
3	GLIB	703-578-4542	Gay & Lesbian information, Internet email, live chat	TBBS	23
4	Monterey Gaming System	408-655-5555	Custom interactive gaming and multi-user conferences	Custom	32
5	Blue Ridge Express	804-790-1675	Large files base with 3 Gigbytes and CD-ROMs	RBBS	36
6	Deep Cove BBS	604-536-5885	News, publications, Internet email, shareware, games	TBBS	33
7	AlphaOne Online	708-827-3619	Adults only, matchmaking, personals, shareware	TBBS	18
8	America's Suggestion Box	516-471-8625	13 Gigs of Shareware, Internet email, Usenet newsgroup	TBBS	16
9	Lifestyle Online	516-689-5390	Chat system, adult lifestyles, personals, email	TBBS	74
10	Prodigy Genealogy	800-775-7714	Information and help of searching for people	OneComm	4
11	Chrysalis	214-690-9295	34 CD-ROMs online, Internet email, online publications	TFP	6
12	Pleasure Dome BBS	804-490-5878	Adults only, matchmaking, Internet email, online games	TBBS	
13	INDEX System, The	404-924-8472	Online publications, BBS lists, Internet email, chat	Wildcat!	
14	Pennsylvania Online	717-657-8699	Internet accounts, 10 Gigs online, Fidonet IC	TBBS	
15	Springfield Public Access	413-536-4365	4000 Usenet newsgroups, 8 CD-ROMs, family BBS	TBBS	
16	OS/2 Shareware	703-385-4325	OS/2 support and shareware files	TBBS	
17	DSC	215-443-7390	Full Internet, Internet accounts, full Usenet	Maximus/2	
18	Wizards's Gate BBS	614-224-1635	No fees, full access on first call, 12 Gig online	PCBoard	
19	Aquila BBS	708-820-8344	Illinois's largest filebase, message base	SHS	
20	Nashville Exchange, The	615-383-0727	Internet, Usenet, FidoNet, shareware, online games	PCBoard	
1	deltaComm Online	919-481-9399	Distribution & support for Telix	TBBS	
	File Shop BBS, The	816-587-3311	US & World News, Stock information, full Internet	PCBoard	
	Traders' Connection	317-359-5199	Largest classified ad database, national access	RA Pro	
	hio	216-381-3320	Large message base, shareware, ads	Custom	
	Son BBS	610-439-1509	General BBS, messges, files, chat, email	PCBoard	
	InfoService	908-205-0189	Since 1982, online games, Internet email	Wildcat!	
	The	703-749-2860	.9 Gigs online, chat, messages, games, matchmaker	TBBS	
	ion Systems	914-667-4066	.Internet, Usenet, shareware, adult area	Falken	
			.5.7 Gigs, 35,000 files, 100 online games, echos	PCBoard	
			.Large shareware system, chat, Internet email	Wildcat!	
			tional 800 access, 10 Gigs online	TBBS	
			games, Usenet, Internet, shareware	TBBS	
			support, 5 Gigs online	PCBoard	
			files online	Board	

Boardwatch reader's choice BBS list copyright © 1994 Jack Rickard, All rights reserved. Reprinted by permission.

However, if you focus on giving callers what they want, the choice is easy – Winners run TBBS, and their callers love them for it. If winning is your goal, call (303) 699-6565 for more information and access to a demonstration system.

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TBBS. The BBS people love to call.

Internet 101:

Real Estate Services

Travel Services

[MindW

MindWire NT is an industrial strength Internet applications server: the #1 software solution for Internet Service Providers. Combined with the Internet Protocol Adapter (IPAD), MindWire NT is the one stop solution for setting up and hosting an online service that stands above the rest. ISP's will appreciate MindWire NT's low maintenance which provides for fewer connection headaches and more free time to surf the net. MindWire NT is easy-to-use and one of the fastest ways to get your online service up and running.

▸ Complete Internet E-Mail System

MindWire NT offers a complete e-mail system with built-in SMTP (Internet) gateway. Users can attach any multimedia file to a message such as sound and image files.

▸ Integrated Web Server

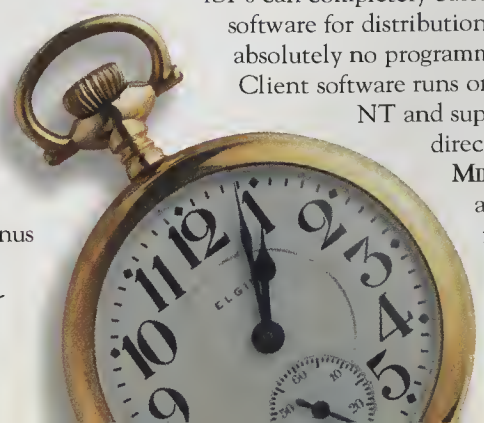
ISP's can create a professional Web site with CGI applications, HTML pages and HTML templates using the built-in MindWire NT Web Server. MindWire applications and graphical menus can be linked to any Web page allowing users to seamlessly jump between documents, live applications, Web pages and custom MindWire menus.

▸ Graphical Windows Interface

MindWire NT's graphical Windows interface allows ISP's to easily customize their entire online service to fit their individual style. MindWire menus include full support for multimedia elements such as sound, images, custom icons and background pictures. Even vector images from Corel, Freehand and Designer can be imported directly into MindWire menus with the new MindWire Vector Builder (add-on).

▸ FREE Client Software with Internet Dialer

ISP's can completely customize the MindWire client software for distribution with their own logo with absolutely no programming required. The MindWire Client software runs on Windows 3.1, 3.11, 95 or NT and supports Internet, LAN and direct modem dial-up to any MindWire NT Server. It also automatically installs and configures a free Internet/PPP dialer for users with Windows 3.1 or 3.11.



You'll be Online in minutes…

Success as an ISP

Materials Required: MINDWIRE NT™ and the IPAD™

Online Gaming

MINDWIRE NT

▸ COMPLETE SCALABILITY

MINDWIRE NT Server is a completely scalable, 32-bit, multithreaded NT service. It uses genuine operating system-level threads to support hundreds of simultaneous users. MINDWIRE NT also supports MS SQL Server as its back-end database.

▸ COMPREHENSIVE SOFTWARE DEVELOPMENT KIT (SDK)

For fast development of new client applications, the MINDWIRE NT Software Development Kit includes an Internet OCX which makes MINDWIRE programming as easy as click and drag. MINDWIRE NT also supports existing development tools such as Visual Basic, Delphi and Visual C++, eliminating the learning curve to understand a new programming language.

▸ IPAD SUPPORT

MINDWIRE NT includes full support for eSoft's Internet Protocol Adapter (IPAD). The IPAD is a single device that integrates all of the necessary components for a full Internet presence, including a router, terminal server, and a suite of Internet clients and servers. Its simplicity allows users to successfully install and operate an Internet site without specialized expertise.

[Think it Real.)

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MINDWIRE Wins Dvorak Award
The 1995 DVORAK Awards

Call us today at (805) 961-8700 x201
and request your copy of the ISP Checklist. Its an easy to follow brochure of everything you need to get up and running.

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Internet.

The Web is fine if you just want to display your home page.
But what good is telling the world about yourself if the world can't talk back?
Suddenly the so-called superhighway feels more like a one-way street.

Interact.

Excalibur, the first graphical online communications server for Windows,™ puts you in the fast lane with more control, more graphics power and more places to go.

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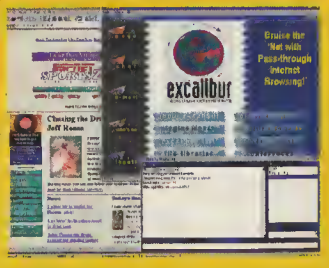

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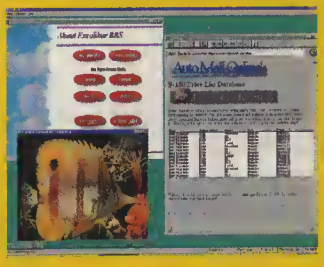

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